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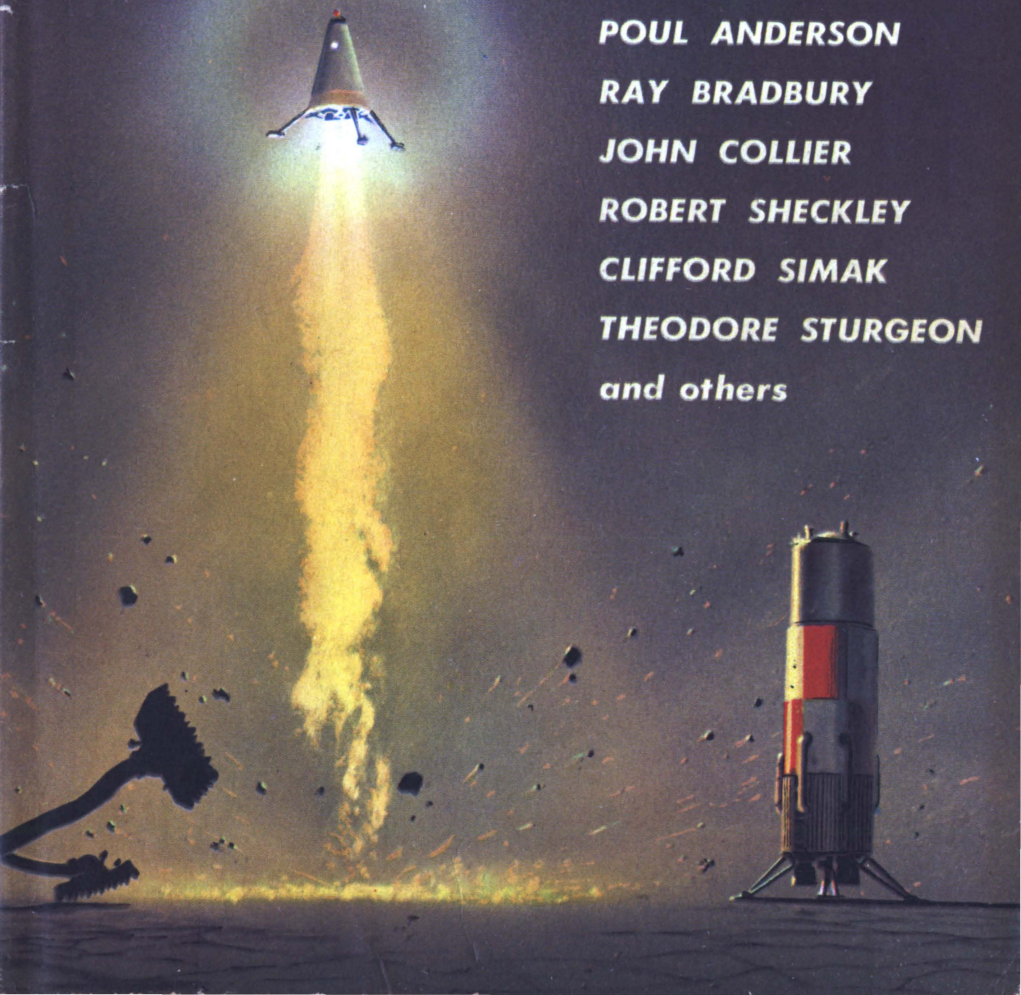
ALL STAR ISSUE

THE MAGAZINE OF

Fantasy AND Science Fiction

MARCH 40¢

POUL ANDERSON
RAY BRADBURY
JOHN COLLIER
ROBERT SHECKLEY
CLIFFORD SIMAK
THEODORE STURGEON
and others



Fantasy and Science Fiction

MARCH *Including Venture Science Fiction*

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Cover by Mel Hunter
(see page 4 for explanation)

Joseph W. Ferman, PUBLISHER *Robert P. Mills*, EDITOR

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In this issue . . .

Mel Hunter's cover this month (and note, incidentally, that it goes around onto the back cover) shows a combination of two separate proposed methods for landing men on the moon, and getting them back. . . . The two descending, man-carrying craft are the top two stages of the five- to seven-stage "Nova." The red bands on the cone shapes are the detachable stages, consisting of fuel and oxidizer tanks which, together with the tripod legs, will be expendable on the return trip. The two craft already on the ground are drone fuel and oxidizer tankers; the manned expedition is not launched until it is known that at least one of the tankers has landed safely on the moon. After the manned ships have refueled for the return trip, the drone will be dismantled and its huge tanks buried to provide a home for the crew during the time it remains on the moon.

We are searching for an author. Some time ago, we received a Ferdinand Feghoot sort of adventure concerning one Fred Flatout who was traveling toward Andromeda on vacation. It was a pleasing idea, about which we could do nothing because the contribution was unsigned. If the author reads this, we'd be grateful for word from him identifying the piece and himself. . . .

Coming next month . . .

Last April we published a story called "Flowers for Algernon," [1] by Daniel Keyes, which drew more reader mail than almost any other single piece in 1959. Next month we bring you another story by Mr. Keyes; it is called "Maro," and we are hopeful that you will think it worth the year's wait. . . . An author who regrettably has been absent even longer is Levi Crow, who shows up next month with "The Hairy Thunderer," another of his fine Indian tales. . . .
Also present will be Fritz Leiber, Gordon R. Dickson, and many more.

[1] Included too in THE BEST FROM FANTASY AND SCIENCE FICTION, 9th Series, published by Doubleday early this February.

The Cibarrans, with their vastly superior powers, were helpful in every way but one—they apparently did not wish men to unlock the ultimate power of their minds. The obvious procedure was to capture a few of the uncapturable, godlike creatures, and secure the secret by beating it out of them.

THE MARTYR

by Poul Anderson

"EVIDENTLY WE HAVE SUCceeded," Medina said. "The men have captured the gods."

"Or the baboons have captured the men," said Narden.

Medina shrugged. "Choose your own analogy, Major. Just be careful not to take it too seriously. The Cibarrans have existed longer than we; they've had time to learn more, even to develop more brain . . . perhaps. And what of it?" An expression crossed his flat countenance, but not one that Narden could interpret. He gestured above his desk with a cigar. "It does not make them supernatural," he finished. "I've always suspected that intellect is a necessary but somewhat overrated quality. As witness the fact that baboons have killed men in the past, and now men have made prisoners of half a dozen Cibarrans."

Narden shifted in his chair. The office was a shining bleakness around him, broken only by the regulation portrait of the Imperial Mother and a map of Earth which, X light-years away in direction Y, betrayed a milligram of human sentimentalism in the hard alloy of Colonel-General Wang K"ung Medina.

"Baboons are extinct," Narden pointed out.

"They never learned how to make guns," snapped the other man. "We'll be extinct too, some generations hence, if we don't overhaul Cibarra."

"I can't believe that, sir. They've never threatened us or anyone else. Everything we've been able to find out about them, their activities at home, on other planets, it's all been benign, helpful, they've come as teachers and—" Narden's voice trailed clumsily off.

"Yes," gibed Medina. "Spiritual

teaching, personal discipline, a kind of super-Buddhism *sans* karma. Plus some information on astronomy, physics, generalized biology. Practical assistance here and there, like making Ta-Tao High Dam possible on Yosev. But any basic instruction in psi? Any hints how to develop our own latent powers—or even any proof or disproof, once and for all, that our race does have such powers in any reliable degree? If they really gave a hoot and a yelp for us, Major, you know they couldn't watch us break our hearts looking for something they know all about. But never a word. In fifty years of contact, fifty years of watching them do everything from dowsing to telepathic multiple hookups and teleportation across light-years . . . we've never gotten a straight answer to one single question about the subject. The same bland smile and the same verbal sidestepping. Or silence, if we persist. God of Man, but they're good at silence!"

"Maybe we have to find all these things out for ourselves," Narden ventured. "Maybe psi works differently for different species, or simply can't be taught, or —"

"Then why don't they tell us so?" exploded Medina. "All they offer us, if you analyze the pattern, is distraction. Twenty years ago, on Marjan, Elberg was studying the Dunne Effect. He'd gotten some very promising results. He showed them to a Cibarran who chanced to be on the same planet. The Cibarran said something about resonances, demonstrated an unsuspected electronic phenomenon . . . well, you know the rest. Elberg spent the remainder of his life working on electron-wave resonance. He came up with some extraordinary things. But all in the field of physics. His original psionic data have gathered dust ever since. I could give you a hundred similar cases. I've collected them for years. It makes a totally consistent pattern. The Cibarrans are not giving out any psionic information whatsoever; and most of the intellectual 'assistance' we get from them turns out to be a red herring pointed away from that trail." His fist struck the desk. "Our independent research has taught us just enough about psionics to show we can't imagine its potentialities. And yet the Cibarrans are trying to keep it from us. Does that sound friendly?"

Narden wet his lips. "Perhaps we can't be trusted, sir. Our behavior in the present instance suggests as much."

Medina thrust out his jaw. "You volunteered, Major. Too late now for jellyfishing."

Narden felt himself redden. He was a young man, stocky and blond like many citizens of Tau Ceti II, speaking Lingua Terra

with their Russki accent. The black and silver uniform of the Imperial Astronaval Service, scientific corps, fitted him crisply; but the awkwardness of the provincial lay beneath. "I volunteered for a possibly dangerous but important mission, sir. That was all I knew."

Medina grinned. "Well?"

After a pause, the general added, "It might cost us our lives, our sanity—even our honor, for the Imperium will have to disown us if we fail and this becomes public. So you'll understand, Major, that shooting a man who drags his feet on the job won't bother me in the least." Harshly: "If we succeed, we stand to gain a million years of progress, overnight. Men have taken bigger chances for less. We're going to learn from those prisoners. Gently if possible, but we'll take them apart cell by cell if we must. Now go talk to them and start your work!"

Baris Narden saluted and marched from the office.

The corridor was even more sterile, a white tunnel where his heels clacked hollowly and a humming came from behind closed doors. Now and then he passed a man, but they didn't speak. There was too much silence. Light-years of silence, thought Narden—beyond these caves, the rock and the iron plains of the rogue planet, glaciers and snowfields that were frozen atmosphere, under the keen glitter of a million stars. Perhaps a dozen men out of the hundred-odd manning this base knew its location and its sunless orbit. This was like being dead. He remembered the hills of Novaya Mechta, his father's house under murmurous trees, and wondered what had driven him thence. Ambition, he thought wearily; the Imperium and its glamor; most of all, the wish to learn. So now he had his science degree, and his small triumphs in the difficult field of psionic research, and was lately a collaborator in kidnapping, which might lead to torture and murder . . . oh, yes, a career.

The guards at the entrance to the research area let him through without fuss. Medina wasn't interested in passes, countersigns, or other incantations. Beyond lay a complex of laboratories and offices. A door stood open to a room where Mohammed Kerintji worked amid crowded apparatus. Meters flickered before him, and the air was filled with an irregular buzzing that sawed at the nerves.

The small dark man didn't seem bothered. He glanced up as Narden passed, and nodded. "Ah, there, Major."

"All serene, Captain?" asked Narden automatically.

"Quite, and better," Kerintji's eyes glistened. "I am not only keeping our tigers tame, but learning a few new things."

"Oh?" Narden stepped into the room.

"Yes. First and foremost, of course, General Medina's basic idea is triumphantly confirmed. Faint, randomly pulsed currents, induced in their nervous systems by the energies I am beaming in at them, do inhibit their psionic powers. They've not teleported out of here, telekineticized me outdoors, anything at all." Kerintji chuckled. "Obviously! Or we wouldn't be here. Maybe this entire planet wouldn't be here. The facts do not, however, confirm the general's hypothesis that psionic energies arise in the brain analogously to ordinary encephalographic waves."

"Why not?" Despite himself, Narden felt an upsurge of interest. This all fitted in with his previous laboratory results.

"Look at these meters. They are set in a dowser type hookup. Energy is required to move the needles against the tension of springs. And the needles are being moved, in a pattern correlated with the randomizer's nerve-currents. Furthermore, the work done against the springs represents too much energy for any living nervous system to carry. The neurones would burn out. Ergo, the randomizer which keeps the Cibarrans helpless does not do so by suppressing their psionic output, but merely prevents them from controlling it. Also ergo, the energy does not come from the nervous system, which is probably just the modulator."

Narden nodded. "My own data have led me to speculate that the body as a whole may be the generator," he said, "though I've never gotten consistent enough readings to be certain."

"We will now," crowed Kerintji. "We can use calorimetry. Measure every erg passing through the Cibarran organism. If output, including psionic work done, is greater than input, we will know that psi involves tapping some outside, probably cosmic force."

"Those are delicate measurements," warned Narden. "I found out how delicate, in my own lab."

"You were using humans, and had to be careful of them. Also, the human output is so miserably feeble and irregular. But look!" Kerintji twisted a dial. One of his meter needles swung wildly across its scale. "I just quadrupled the randomizing energy. The psi output increased fifty-fold. Like sticking a pin in a man and watching him jump. We can *control* this!"

Narden left, a bit sick.

Another pair of guards stood before the prison suite. It was fitted with a spaceship airlock, the outer valve being dogged shut before the inner one could be opened. Narden wondered if it helped anything except the fears of men. The rooms beyond were

large and comfortable. And did that help anything except the consciences of men?

Two Cibarrans occupied a sofa. They didn't get up; their civilization had its rich rituals, but almost entirely on the mental plane. Big amber-colored eyes, and the fronded tendrils above, turned to Narden. He felt afresh, sharply, how beautiful they were. Bipedal mammals, long legs giving a sheer two meters of height, three-clawed feet, slender humanoid hands, wide chest and shoulders, large oval heads with faces not so much flat as delicately sculptured, short gray fur over the whole body, thin iridescent kilt and cloak . . . words, without relationship to the feline grace before him.

One of them spoke, in calm resonant Lingua Terra: "I call myself Alanai at this moment. My companion is Elth."

"Baris Narden." The man shifted from foot to foot. The tiniest of smiles curved Alanai's mouth.

"Please be seated," said Elth. "Would you like refreshment? I am told we can ring for food as required."

Narden found a chair and perched on its edge. "No, thanks." *I may not break bread with you.* "Are you well?"

"As well as can be expected." Alanai's grimace was a work of art. Narden remembered the theory of some xenologists, that Cibarran "telepathy" was in part a matter of gestures and expressions. It was plausible, in a race where each individual evolved a private spoken language to express nuances uniquely his own, and learned those of all his friends. But it would not account for the proven fact that Cibarrans, without apparatus, could travel and communicate across light-years.

"I hope—" Narden dragged the words out— "I hope conditions are not unduly inconvenient."

"The nervous-energy scrambling? Yes and no," said Elth. "We can block off physical pain and prevent lesions. But the deprivation— Imagine being deafened and blinded."

His tone remained gentle.

"I'm afraid it's necessary," Narden mumbled.

"So that we can't escape, or summon help, or otherwise thwart your plans? Granted." Alanai reached out to a crystal-topped coffee table on which stood a chess set. He began to play against himself. It was a swift and even match. Brainjumbler or not, the Cibarrans retained a mastery of their own minds and bodies such as humans had hardly dreamed about.

"I am curious as to how you engineered the kidnapping," said Elth, not unmaliciously. "I have considered numerous possibilities."

"Well—" Narden hesitated. *The hell with Medina.* "We knew

your planet was sending a mission to New Mars. The world we call New Mars, I mean. One of the native tribes had asked your help, via interstellar traders, the usual grapevine, to rationalize and make beautiful its own culture. We've seen a lot of planets where you've done a similar job, and didn't expect you could resist such an appeal, even if it was way out of your normal territory. Our psychotechnicians had spent years, putting the chiefs of that tribe up to it."

Elth actually laughed.

Narden plunged on, as if pursued. "What little we've been able to discover about psi indicated certain limitations which could be exploited. You can probably communicate across the universe—"

"There are ancient races in other galaxies," Alanai agreed.

A third Cibarran appeared in the doorway. "There is one entire intelligent galaxy," he said, very low. "We are as children at its feet."

"Don't you think we might also want to—" Narden checked himself. "Distance can't block a telepathic message, but noise can. If you aren't actually tuned in on someone who is parsecs away, you'll receive only the babble of billions and trillions of living minds on planets throughout space—and block it out of your own perceptions. So we didn't expect you would get any hint of our plot. After all, New Mars is out in this arm of the galaxy, and Cibarra lies 20,000 light-years toward the center.

"When your delegation arrived, it was invited to visit the Imperial *chargé d'affaires*. He knew nothing; it was routine courtesy. The kidnappers were waiting at his house, unbeknownst to him. They were raw recruits from colonial planets where the languages and cultures are different from Earth's. Our researches had suggested that you couldn't readily read the mind of someone whose socio-linguistic background was new to you. His conceptual universe would be too different. You'd at least need to study him a short while, classify his way of thinking, before you could put yourselves in rapport. So . . . these men knocked you out with stun beams, whisked you onto a spaceship, and kept you unconscious all the way to this base."

Elth laughed again. "Clever!"

"Don't compliment me," said Narden hastily. "I had nothing to do with it."

"You spoke as if you did," said Alanai.

"Did I?" Narden searched a flustered memory. "Yes. Yes, I did say 'we,' didn't I? Must have been thinking in . . . in collective terms. I was only co-opted at the last minute, after the capture. This isn't being done for selfish reasons, you know."

"Why, then?" asked Alanai, but softly, as if he already knew the answer. And the other Cibarrans grew as still as he.

"Not for ransom, as you may have thought, or—anything but the need of our people," stumbled Narden. "It's been fifty years now . . . since Imperial ships, exploring toward galactic center . . . encountered your race on some of the planets there. We've had sporadic contact, from time to time, since then. Just enough to understand the situation. Your home world is much older than ours—"

"It was," corrected Alanai. "The Lost was a planet of an early Population Two star, hence poor in metals. We lingered ages in a neolithic technology, which may have encouraged our peculiar mental form of development. Physical science was carried out with ceramics, plastics, acid-filled conductors, as pure research only. The final hottening of our sun forced us to leave our home. That was many thousands of years ago; and yet we too, in a way, have known the Lost, and mourned it with our fathers—"

Elth laid a warning hand on his wrist. Alanai seemed to wake from a dream. *"Oa, Anna,"* he murmured.

"Yes," said Narden. "I know all that. I know too how you have chanced to meet them. But only in the smallest ways."

"You could not assimilate physical knowledge at a much greater rate than you are already producing it," said one of the other Cibarrans. Four of them now stood in the door. Narden squared his shoulders and said:

"Perhaps. There are no hard feelings about that. We're quite able to learn whatever we wish in physics. We have no reason to believe you're very far ahead of us in any branch of it, either. You may well lag behind in certain aspects which never interested our civilization, such as robotics. In a finite universe, physics is limited anyway. What embitters us is your withholding the next stage of basic knowledge—your active hindering of us, now and then, in our own search."

Elth said, the barest edge of harshness in his tone, "You captured us hoping to make us teach you about that aspect of reality you call psionics. Or, if we refuse to instruct you—and we do—you will seek to gather data by studying us."

Narden swallowed. "Yes."

Alanai said without haughtiness (and did tears blur his eyes?), "Cibarran philosophers were exploring these concepts before Earth had condensed from cosmic dust. Do you really believe we are reticent because of selfishness?"

"No," said Narden doggedly. "But my people . . . we aren't the kind who accept meekly that

father knows best. We've always made our own way. Against beasts and glaciers and ourselves and the physical universe. Now, against gods, if we must."

Elth shook his head, a slow regretful motion. "I am as finite as you are," he said. "More, in some ways. I do not believe I could find the courage to live, if I were—" He bit off his words, suddenly alarmed.

"We've got to do this," said Narden. He stood up. "Forgive us."

"There is nothing to forgive," said Alanai. "You cannot help it. You are young and raw and greedy for life. Oh," he whispered, "how you hunger for life!"

"And yet you leave us to stagnate, half animal, when we might also be sending our minds across all space?" Narden looked into the grave strange faces. He knotted his fists together and said, "For your own sakes, help me. I don't want to rip out what you know!"

"For your own sake," said Alanai, "we shall fight back. Every step of the way."

At another date Narden remembered the words. He sighed. "It's been one long struggle."

Medina settled himself more firmly in his chair. "They haven't made any physical resistance," he declared.

"This is not a physical problem," Kerintji reminded him.

Medina had the practicality to leave his scientists alone; but he had finally demanded an informal accounting, which Narden had to admit was reasonable. Elsewhere in artificial caverns, engineers worked with the machines that kept men alive, soldiers drilled and loafed and wished they were home, technicians pondered the interpretation of measurements and statistical summaries. Here in the central office, Narden felt immensely apart from it all, somehow more akin to the prisoners.

Isn't every man? he told himself. *Isn't the Cibarran silence keeping our whole race locked in our own skulls?* But he knew, tiredly, that his indignation was only words. One of the slogans men invented, to justify their latest cruelty and most fashionable idiocy.

If we could see across the universe, and into the heart, as they do on Cibarra, we wouldn't need slogans, Narden thought. The idea straightened his back a little. He looked across the big desk and said:

"Since they don't cooperate, we've so far used them as mere generators of psionic forces. We were held up for days when they worked out some method to damp their own output. I think we have, now, an inkling of how that was done—an interference phenomenon within the nervous system itself, probably painful as

hell. But it frustrated us at the time."

"How did you lick it?" Medina inquired.

"Put one of them under anesthesia," Kerintji said. "We got response again, to nervous stimuli. More organized response, in fact, than when consciousness was present to throw out random bursts of energy with deliberate intent to confuse our readings. So we kept him anesthetized for a week. After that, the others quit their damping."

Narden remembered how Alanai had lain amidst the indignity of intravenous tubes, and how the machine's nerve-pulses had convulsed his body until he must be strapped down. He remembered how thin the Cibarran was at last, when they let him waken and returned him to the prison suite. And yet he had looked on them without bitterness. It seemed to Narden, thinking back, that the yellow eyes held pity.

"Never mind the details now," said Medina. "Have you reached any conclusions?"

"In four weeks?" scoffed Kerintji.

"Yes, yes, I know it'll take decades to work out a coherent psi theory. But you must at least have some working hypotheses."

"And some clear conclusions," Narden told him, speaking fast to hold at arm's length the image of Alanai.

"Well?" Thick fingers drummed the desk top.

"First, we've established certain things about the energy involved in these processes. It's never very great, by mechanical standards. But at peak stimulation, it does go far over the total possible output of the physical organism. That proves it must come from elsewhere. The psionic adept, to borrow the common term, puts in a small amount of energy himself; in fact, he radiates constantly in the psionic spectrum at a definite minimum level. But for purposes like doing work on material objects—teleportation, telekinesis—and presumably for all other purposes, he's more analogous to an electronic tube than to a generator. He borrows and modulates the psionic energy already there."

"What do you mean by 'psionic spectrum' and 'psionic energy'?" demanded Medina.

Kerintji shrugged. "A convenient label for a certain class of phenomena. It is not in itself electromagnetic, thermal, or gravitational; and yet it's convertible to those physical forms. For instance, it was proven some years ago by a researcher on Earth that poltergeists do work by altering local gravitational parameters."

"Then physical energy must also be convertible to psionic," Medina said.

Narden nodded, with an increase in his already considerable

respect for the general's mind. "Yes, sir. The mechanism which makes the two-way conversion appears to be the living organism itself. Most species, including man, are very weak converters, with almost no control. The Cibarrans are extraordinarily powerful, sensitive, and complex converters. They can do anything they want to, repeatedly, with psionic forces; whereas even the greatest human adepts can do only a few simple things sporadically."

"I gather you knew as much before you ever got here," Medina complained. "What have you learned in *this* project?"

"What do you expect in four weeks?" said Narden, irritated as Kerintji had been. "I think we've done rather well. Having a strong, reliable psionic source at my disposal, I've been able to confirm a few tentative conclusions I'd reached previously. Besides establishing that the individual does not provide all his own psi energy, I've shown that its transmission is at least partly by waves. I've created interference phenomena, you see, as registered by detectors appropriately placed."

Medina pursed his lips. "Are you certain of that, Major? I thought psionic propagation was instantaneous."

"And waves require a finite velocity. True. But I've no idea what the speed of a psionic wave is. Far beyond that of light, certainly. Maybe it only requires a few seconds to go around the universe. After all, the Cibarrans admit being in communication with distant galaxies."

"But the inverse square law—"

"Somehow, they evade it. Perhaps psionic forces operate continuously, no quantum jumps, and have an exceedingly low noise level. Even so, simple broadcast transmission across interstellar distances is obviously impossible. You yourself, sir, realized the Cibarrans couldn't 'listen in' on all the minds in a sphere light-years across; and then there's also attenuation to overcome. There has to be some kind of tuning or beaming effect. How it works, I don't know."

Kerintji perked up. "Wait a bit, Major," he said. "You were speculating about that too, the other day."

"Sheer speculation," said Narden uncomfortably.

"Let's hear it anyhow, "said Medina.

"Well, if you insist. Considering that space is of finite extent, however large, and that psi transmission is by waves, however unlike classical electromagnetics . . . it should theoretically be possible to establish a, uh, a standing wave on a cosmic scale. In effect, a vast total amount of psionic energy would pervade all space in an orderly pattern. Its source would be the basic psionic radiation of all

life, everywhere in the cosmos. An adept could draw as much of this energy as he needed—and could handle—at any one time, and use it. Living organisms would always be putting more back, so the total would remain nearly constant. In fact, it would increase, because radiated energy isn't lost with the death of the radiator, and new life is always getting born. This adds a rather fantastic clause to the second law of thermodynamics. Physical energy becomes more and more unavailable, as entropy increases, but psionic energy becomes more and more available. Almost as if the universe were slowly evolving from an inanimate, purely physical state, to an ultimate . . . well . . . pure spirit."

Medina snorted. "I'll believe that when I see it!"

"I told you it was speculation," said Narden. "I don't take it seriously myself."

"But it would explain all the facts," interrupted Kerintji eagerly. "The mind modulates this standing wave, do you see. Oh, infinitesimally, of course, compared with the enormous natural amplitude; but the modulation is there. It can ride the standing wave with a phase velocity of its own, that may be higher than the group velocity of the total. It can be directed and tuned."

"There are even weirder implications," said Narden, a little impatiently. "For one thing, this would mean that the mind isn't a mere epiphenomenon of the brain. The modulations of the cosmic wave may be as important to the mind's existence as the physical modifications of neurones and synapses. But don't you see, General, we can't go yondering off like that. We have to work step by step, grab one fact at a time. Fifty years from now it may be possible to talk about mind versus body, and make sense. Right now, it's a waste of man-hours that should be spent measuring the constants of propagation."

"Or getting those damned Cibarrans to cooperate," grumbled Kerintji.

Medina nodded. "Yes, I understand. Actually, gentlemen, I brought you here to discuss practical problems. I only wanted the necessary background first."

He stared at the map of Earth for a while. Then, swiftly, as if his words were a bayonet: "I expected something like this. Planned on it. But there was always a chance the Cibarrans would give up, or that you would make some breakthrough. I suppose both chances still exist. But they look smaller every day, don't they? So this will have to be done the hard way. Years. Our entire lifetimes, perhaps. Not even any home leaves, for any of us, I'm afraid. Because the other Cibarrans will wonder what's happened to their mission, and go looking

through the galaxy . . . telepathic. . . ." He took a cigar from the box on his desk, stuck it on his mouth and puffed savagely to light it. I'll do what I can to make conditions tolerable. We'll enlarge the caverns, build parks and other recreation facilities. Eventually we may even be able to bring in some prospective wives for our personnel. But—" wryly — "I'm afraid we're prisoners too."

Narden entered the suite and closed its inner valve. The six Cibarrans were gathered in the living room. He was shocked to note how gaunt they all were, how their pelts had grown dull. Alanai was almost a skeleton, only his eyes alive. Narden thought: *Being locked up this way, and probed, and watched, and always feeling the energy chaos in their nerve cells, which deafens and blinds their inmost selves, is destroying them. They're going to end my own captivity by dying.*

The ridiculous flutter of hope disappeared. *No. We have biochemists on our staff, who understand their metabolisms too well. Vitamins, hormones, enzymes, bioelectrics, will bar that road too.*

Elth said quietly, "There is grief in you, Baris."

Narden halted. When he stood, and they sat on the floor or stretched on the couches, his head was above theirs. "I've conferred with General Medina," he said.

One who sometimes called himself Ionar and sometimes Dwanin, but mostly used a trill of music for his name, stirred. "Your determination was reaffirmed," he postdicted.

Their understanding of the human mind no longer astonished Narden. He had learned to allow for the fact that they usually knew in advance, from sheer logic, what he would try next. "We'll continue as long as we must," he told them. "Do you know what that means?"

"Until we are all dead." Alanai's words were barely audible.

"Or rescued," said Elth. "Even unhelped by our own telepathy, our friends will suspect what has happened."

"This is too big a galaxy to ransack," Narden said. "Everyone who knows anything about the project is right here. Why are you holding out? Do you think I enjoy what's being done to you?"

"I beg." Alanai raised one strengthless hand. "Do not hurt yourself so. Your own pain is the worst one we have to endure."

"You can end it all, and go free, any time you wish," Narden replied. "We're not afraid of reprisals from your planet; that isn't in your nature. We'll make any reparation we can. But if you really care about us—Can't you see what it's beginning to do to my race, what it will do more and more as the years go by . . . this

living in the shadow of beings who're like gods? Who own powers that make our sciences look like a child playing in the mud? If we can't have a share, even a small share, in the things and discoveries that matter, what's the use of our existing at all?"

Ionar groaned aloud. "Don't," he said. "Have we not watched this happen before, again and again, in the long history of our race? Let us help you in the only way we can. Let us show your people how to make the cultural adjustment and be content with what they have and what they are."

Something stirred in Narden, lifted his bent head and crackled through his voice. "Let you domesticate us, you mean? No, before God! We're men, not those miserable dog-peoples we've found on too many planets where you've been!"

Elth leaned forward. "But see here," he argued, "how do you know psionics would be of any value to you? Do you envy the Osirian his ability to breathe hydrogen, or the Vegan his immunity to ultraviolet radiation?"

"Those aren't lacks which handicap us," Narden snapped. "We can send a remote-control robot anywhere one of those races can go. But how can we even know what we *are* until—"

The idea flashed through him, wildest of chance shots, but he hurried on without daring to stop:

"—our minds have also ridden the standing wave around the universe?"

It grew totally quiet in the room. So quiet that for an instant Narden thought he had been deafened, and knew a little of the horror that his randomizers were working in the Cibarrans, and wondered at a spirit which could endure it and not even need to forgive. But his feeling vanished in the upward leap of a flame.

By Man and Man's God, I've hit a mark! They can't hide their own shock. They believed they could keep me plodding indefinitely, and hoped something would turn up meanwhile to save them. Now . . . my friends, it is already too late for you!

Elth spoke, and his lips were the only thing which moved in all that gray band of beings. "So you have hypothesized it? I did not believe any human had quite that much intuitive ability."

"And I'm going to work along those lines." Narden tried to keep his voice from shaking. His pulse roared in his ears. "Even so vague and general an idea puts me fifty years ahead. I'll know what to try, what to look for. The theoreticians can develop the concept mathematically. The biologists can work on the exact method of psi generation. Eventually there'll be an artificial generator, a mutant

animal perhaps, for making controlled experiments. There's no way short of war for Cibarra to stop us!" It was anticlimax, but he dropped his tone again and added, "Why don't you help us, then, instead of hindering?"

None of them had really listened. Eyes began to seek eyes. A few words murmured in an unknown language. Alanai gestured. Elth sprang to him. Alanai got up, slowly and painfully, leaning on the other. He passed from the room. The rest followed.

Somehow, it was a procession.

Norden gaped a moment, sprang forward and caught the arm of Ionar, who was at the end of the line. "Where are you going?" he cried. "What's this all about?"

Now the amber eyes looked down on him. "We had discussed this contingency," said the Cibarran. "We delayed, because physical life is sweet and none of us had explored its limits yet. But you leave us no choice."

With sudden unexpected strength, he broke loose and glided out through the doorway. Narden stood staring. He heard a murmur of their voices, perhaps they sang, he couldn't be sure.

Kerintji screamed through an intercom: "Get in there, you idiot! Stop them! They're killing him!"

Narden remembered in shock that every room here had a spy lens. He cracked his paralysis and ran. The main valve opened behind him and a pair of soldiers burst in.

Alanai was already dead. Elth and another Cibarran had broken his neck with a single skillful twist. They laid the body down and turned calmly to face the Imperial guns.

"Don't move," Narden heard himself shrill, and as if far away.

"Separate them," chattered Kerintji through the intercom. "Chain them up. Keep a suicide watch—"

"Whatever you wish," said Elth. "We have completed it."

He stooped and with a slow tender gesture closed the eyes of Alanai. Yet Narden thought his tone had not entirely hidden an eagerness, like a child on birthday morning.

"They didn't do it for no reason." Medina puffed till smoke hid his face. "They sacrificed the weakened one, who'd be easiest to kill. Didn't even try to eliminate any others. What touched off their action?"

"My guess about the nature of psionic transmission wasn't too far off," Narden said. "They didn't dare let me continue my work."

"But we still have five of them! and the body of the sixth." Medina glanced at Kerintji. "No luck with reanimation, eh?"

"No, sir." The little man shook

his head. "Our medics used emergency techniques immediately: opened the skull and applied direct nutrition and stimulation to the brain, as well as the usual visceral procedures. They put in a spiral jack, bypassing the damaged section of cord. By that time, any human would have been conscious again. You would at least expect the organs to respond individually. But no, the Cibarran stayed dead. I mean dead. A piece of meat. Microscopic tissue sections were examined, and even the less organized cells, such as the liver, were inert."

"Well," Medina said, "I guess we can't expect critters from another planet to die after our own pattern."

"But they ought to, sir," Kerintji protested. "They breathe oxygen, metabolize carbohydrates and amino acids, just like us. Their cells have nuclei, genes, chromosomes. Oh, there are peculiarities, of course, such as a very fine network of filaments in every cell, whose purpose we don't understand at all. But they should not be *that* different!"

Medina ground out his cigar, stared at it, and fumbled after another. "We'll find out," he said. "Maybe. You're such a good guesser, Major Narden, suppose you tell us why they did this."

"I don't know," said Narden slowly. "I don't seem able to think about it."

"For Mother's sake! Control that damned conscience of yours! We're doing this for man, the whole race, all our descendants, from now till the end of forever."

Narden remembered Alanai again, as if across ages of time. *"You cannot help it. You are young and raw and greedy for life. Oh, how you hunger for life!"* But his brain felt stiff and strange. He sat unmoving.

Kerintji said, tense in the lips, "I can guess, General. And if I am right, we had best evacuate the whole project elsewhere. At the instant he died, when he didn't really need his nervous system any longer, Alanai could have burned it out by transmitting a telepathic call loud enough to be heard at Cibarra through the interference of our inhibitor and all the usual noise. A shout to bring them here—"

"Yes."

When the word was spoken, Medina laid down his cigar and sat like a yellow meal sack, all the life drained from his face. Narden and Kerintji must turn around in their chairs to see. Kerintji's hand dropped to his belt and a pistol leaped up. A force that tore the skin off his fingers yanked away the gun. It clattered across the floor.

Narden thought, somewhere at the back of his awareness, that he had always been expecting this moment. He looked up and up

the tall gray form, to the amber gaze which could not be troubled to hold anger at him. The head was enclosed in a cage of wires and the air about it shimmered. He decided vaguely that it must protect against the randomizing energies. Doubtless only the necessity of constructing such helmets had delayed the rescue these few hours.

"I congratulate you upon your deduction," said the voice which was music even in man's language. "You need not be alarmed for your own safety. Your victims will now depart, of course, and we shall take precautions against a repetition of episodes such as this, but that concerns only ourselves. It is not our way to interfere with the freedom of others, it would be damaging to our own ethos, but we shall publicly appeal to the Imperium to desist from this research, as being too dangerous; and I think, in the course of time, that men will heed."

Narden rose. He took a step toward the Cibarran, and was halted by an unseen wall. He raised his hands. "But it is my work!" he cried aloud.

The impersonal eyes could not have pierced his skull; but the Cibarran asked gently, "Was there not a house in the forest, on a planet called Novaya Mechta?"

Another shape flashed into the office, Elth. He was helmetless—the randomizer must now be silenced—and his tendrils shivered with joy. "I have come to say goodbye, Baris."

Medina covered his face. "Damn you, damn you."

"We learned something," Kerintji snarled. "A few of us, in spite of all you can do, will keep learning. One day it won't be enough for you to commit murder and get help. There will be no help for you anywhere."

Narden stood silent once again. He had no idea if some little part of him, a rudimentary molecule which might in a million years of evolution become a true psionic organ, had caught one of the great thoughts now swirling and singing around him. It might have been subconscious logic, even. "No," he said.

"What?" Kerintji blinked. And now the Cibarrans grew still.

"Your burnout theory," Narden said. It felt like a stranger talking. "They hope we'll think that was how Alanai got the word to them. But it's another false trail. Communication is by patterns, not by chaotic bursts of energy. How could he have organized his nervous system enough, especially when he was dying? The randomizer was in operation all that while. No . . . remember what I also theorized . . . that the pattern which is the mind could be imposed on the cosmic wave, as well as on the neurone com-

plex? He died to make the transfer complete. To liberate his mind, so to speak, from the confused body. He didn't send a shout to Cibarra. He went there himself, as a wave pattern!"

Medina looked up. "You don't mean he's still alive?" he choked.

"In a way." Narden's words tumbled over each other. He himself, his consciousness, did not know whither they led. "In a very real way, yes. But not identically with his life while the body functioned. He hasn't got physical parts or senses any longer, you see. But of course, he must have gained new psionic abilities which more than compensate. He could speak mind to mind with living Cibarrans, tell them the facts—and then, maybe, go on to the next phase of his existence, like a butterfly leaving the cocoon—"

He turned to the watching Cibarrans and shouted, "That's what you've been trying so hard to keep us from finding out, that death isn't the end! But why? You claim to be interested in our happiness. You couldn't have told us anything more wonderful than that we have immortal souls!"

The stranger vanished. Elth remained a second more. Narden realized it was a surrender: the answer given now because it would be discovered anyway, unless these humans joined in hiding the fact. When he spoke, it was with surgical compassion.

"You don't," he said.



Ray Bradbury, whose quicksilver talent runs from the most delicate fantasies to the gusty force of his Moby Dick *screenplay, here tells another of those finely wrought tales which almost certainly only he could tell—this time concerning an unfulfilled woman, and the terrible temptation of him whom she feared most.*

DEATH AND THE MAIDEN

by Ray Bradbury

FAR OUT IN THE COUNTRY BEyond the woods, beyond the world really, lived Old Mam, and she had lived there for ninety years with the door locked tight, not opening for anyone, be it wind, rain, sparrow tapping or little boy with a pailful of crayfish rapping. If you scratched at her shutters, she called through:

"Go away, Death!"

"I'm not Death!" you might say.

But she'd cry back, "Death, I know you, you come today in the shape of a girl. But I see the bones behind the freckles!"

Or someone else might knock.

"I see you, Death!" would cry Old Mam. "In the shape of a scissors-grinder! But the door is triple-locked and double-barred. I got flypaper on the cracks, tape on the keyholes, dustmops up the chimney, cobwebs in the shutters, and the electricity cut off so you can't slide in with the juice! No telephones so you can call me to my Doom at three in the dark morning. And I got my ears stuffed with cotton so I can't hear your reply to what I say now. So, Death, get away!"

That's how it had been through the town's history. People in that world beyond the wood spoke of her and sometimes boys doubting the tale would heave chunks against the roof-slates just to hear Old Mam wail, "Go on, goodbye, you in black with the white, white face!"

And the tale was that Old Mam, with such tactics, would live forever. After all, Death couldn't get in, could he? All the old germs in her house must have long since given up and gone to sleep. All the new germs running through

the land with new names every week or ten days, if you believed the papers, couldn't get in past the bouquets of rockmoss, rue, black tobacco and castorbean at every door.

"She'll bury us all," said the town way off where the train ran by.

"I'll bury them all," said Old Mam, alone and playing solitaire with Braille-marked cards, in the dark.

And that's how it was.

Years passed without another visitor, be it boy, girl, tramp or traveling man, knocking at her door. Twice a year, a grocery clerk from the world beyond, seventy himself, left packages that might have been birdseed, could have been milk-bone, biscuit, but were almost certainly stamped into bright steel cans with yellow lions and red devils inked on the bright wrappers, and tread off over the choppy sea of lumber on the front porch. The food might stay there for a week, baked by the sun, frozen by the moon; a proper time of antisepsis. Then, one morning, it was gone.

Old Mam's career was waiting. She did it well, with her eyes closed and her hands clasped and the hairs inside her ears trembling, listening, always ready.

So she was not surprised when on the 7th day of August in her 91st year, a young man with a sunburnt face walked through the wood and stood before her house.

He wore a suit like that snow which slides whispering in white linen off a winter roof to lay itself in folds on the sleeping earth. He had no car; he had walked a long way but looked fresh and clean. He carried no cane to lean on, and wore no hat to keep off the stunning blows of the sun. He did not perspire. Most important of all, he carried only one thing with him, an eight-ounce bottle with a bright green liquid inside. Gazing deeply into this green color, he sensed he was in front of Old Mam's house, and looked up.

He didn't touch her door. He walked slowly around her house and let her feel him making the circle.

Then, with his x-ray eyes, he let her feel his steady gaze.

"Oh!" cried Old Mam, waking with a crumb of graham cracker still in her mouth. "It's you! I know who you came as, this time!"

"Who?"

"A young man with a face like a pink summer melon. But, you got no shadow! Why's that? Why?"

"People are afraid of shadows. So I left mine back beyond the wood."

"So I see, without looking."

"Oh," said the young man with admiration. "You have Powers."

"Great Powers, to keep *you* out and *me* in!"

The young man's lips barely

moved. "I won't even bother to wrestle you."

But she heard. "You'd lose, you'd lose!"

"And I like to win. So—I'll just leave this bottle on your front stoop."

He heard her heart beating fast through the walls of the house.

"Wait! What's in it! Anything left on my property, I got a right to know!"

"Well," said the young man.

"Go on!"

"In this bottle," he said, "is the first night and the first day you turned eighteen."

"What, what, what!"

"You heard me."

"The night I turned eighteen . . . the day?"

"That's it."

"In a bottle . . . ?"

He held it high and it was curved and shaped not unlike a young woman. It took the light of the world and flashed back warmth and green fire like the coals burning in a tiger's eyes. It looked now serene, now suddenly shifted and turbulent in his hands.

"I don't believe it!" cried Old Mam.

"I'll leave it and go," said the young man. "When I'm gone, try a teaspoon of the green thoughts in this bottle. Then, you'll know."

"It's poison!"

"No."

"You promise, mother's honor?"

"I have no mother."

"What do you swear on?"

"Myself."

"It'll kill me, that's what you want!"

"It will raise you from the dead."

"I'm not dead!"

The young man smiled at the house.

"Aren't you?" he said.

"Wait! Let me ask myself: are you dead? *are* you? or *nearly*, all these years?"

"The day and the night you turned eighteen," said the young man. "Think it over."

"It's so long ago!"

Something stirred like a mouse by a coffin-sized window.

"This will bring it back."

He let the sun wash through the elixir that glowed like the crushed sap of a thousand green blades of summer grass. It looked hot and still as a green sun, it looked wild and blowing as the sea.

"This was a good day in a good year of your life."

"A good year," she murmured, hidden away.

"A vintage year. Then there was savor to your life. One swig and you'd know the taste! Why not try it, eh? Eh?"

He held the bottle higher and further out and it was suddenly a telescope which, peered through from either end, brought to focus a time in a year long gone. A green

and yellow time much like this noon in which the young man offered up the past like a burning glass between his serene fingers. He tilted the bright flask and a butterfly of white hot illumination winged up and down the window shutters, playing them like grey piano keys, soundlessly. With hypnotic ease, the burning wings frittered through the shutter slots to catch a lip, a nose, an eye, poised there. The eye snatched itself away, then curious, relit itself from the beam of light. Now having caught what he wanted to catch, the young man held the butterfly reflection steady, save for the breathing of its fiery wings, so the green fire of that far distant day poured through the shutters of not only ancient house but ancient woman. He heard her breathe out her muffled startlement, her repressed delight.

"No, no, you can't fool me!" She sounded like someone deep underwater, trying not to drown in a lazy tide. "Coming back dressed in that flesh, you! Putting on that mask I can't quite see! Talking with that voice I remember from some other year. Whose voice? I don't care! My Ouija Board here on my lap spells who you really are and what you sell!"

"I sell just this twenty-four hours from young life."

"You sell something else!"

"No, I can't sell what I *am*."

"If I come out you'd grab and shove me six feet under. I've had you fooled, put off, for years. Now you whine back with new plans, none of which will work!"

"If you came out the door, I'd only kiss your hand, young lady."

"Don't call me what I'm not!"

"I call you what you could be an hour from now."

"An hour from now . . ." she whispered, to herself.

"How long since you been walked through this wood?"

"Some other war, or some peace," she said. "I can't see. The water's muddy."

"Young lady," he said, "it's a fine summer day. There's a tapestry of golden bees, now this design, now that, in the green church aisle of trees here. There's honey in a hollow oak flowing like a river of fire. Kick off your shoes, you can crush wild mint, wading deep. Wild flowers like clouds of yellow butterflies lie in the valley. The air under these trees is like deep well-water cool and clear you drink with your nose. A summer day, young as young ever was."

"But I'm old, old as ever was."

"Not if you listen! Here's my out-and-out bargain, deal, sale; a transaction betwixt you, me, and the August weather!"

"What kind of deal, what do I get for my investment?"

"Twenty-four long sweet summer hours, starting now. When we've run through these woods and picked the berries and eaten the

honey, we'll go on to town and buy you the finest spiderweb thin white summer dress and lift you on the train."

"The train!"

"The train to the city, an hour away, where we'll have dinner and dance all night. I'll buy you four shoes, you'll need them, wearing out one pair!"

"My bones, I can't move—"

"You'll run rather than walk, dance rather than run. We'll watch the stars wheel over the sky and bring the sun up, flaming. We'll string footprints along the lake shore at dawn. We'll eat the biggest breakfast in mankind's history and lie on the sand like two chicken pies warming at noon. Then late in the day, a five pound box of bonbons on our laps, we'll laugh back on the train, covered with the conductor's ticket-punch confetti, blue, green, orange, like we were married! and walk through town seeing nobody, no one, and wander back through the sweet dusk-smelling wood into your house. . . ."

Silence.

"It's already over," murmured her voice. "And it hasn't begun."

Then:

"Why are you doing this? What's in it for you?!"

The young man smiled tenderly.

"Why, girl, I want to sleep with you."

She gasped.

"I never slept with no one in my life!"

"You're a . . . maiden lady?"

"And proud *of* it!"

The young man sighed, shaking his head.

"So it's true—you are, you really are, a maiden."

He heard nothing from the house, so listened.

Softly, as if a secret faucet had been turned somewhere with difficulty, and drop by drop an ancient system was being used for the first time in half a century, the old woman began to cry.

"Old Mam, why do you cry?"

"I don't know," she wailed.

Her weeping faded at last and he heard her rock in her chair, making a cradle rhythm to soothe herself.

"Old Mam," he whispered.

"Don't call me that!"

"All right," he said. "Clarinda."

"How did you know my name? No one knows!"

"Clarinda, why did you hide in that house, long ago?"

"I don't remember. Yes, I do. I was afraid."

"Afraid?"

"Strange. Half my years, afraid of life. The other half, afraid of death. Always some kind of afraid. You! Tell the truth, now! When my twenty-four hours are up, after we walked by the lake and took the train back and come through the woods to my house, you want to—"

He made her say it.

"—*sleep* with me?" she whispered.

"For ten thousand million years," he said.

"Oh." Her voice was muted. "That's a long time."

He nodded.

"A long time," she repeated. "What kind of bargain is that, young man? You give me twenty-four hours of being eighteen again and I give you ten thousand million years of my precious time."

"Don't forget, *my* time, too," he said. "I'll never go away."

"You'll lie with me?"

"I will.

"Oh, young man, young man. Your voice. So familiar."

"Look."

He saw the keyhole unplugged and her eye peer out at him. He smiled at the sunflowers in the field and the sunflower in the sky.

"I'm blind, half blind," she cried. "But can that be Willy Winchester way out there?"

He said nothing.

"But Willy, you're just twenty-one by the look of you, not a day different than you were seventy years back!"

He set the bottle by the front door and walked back out to stand in the weeds.

"Can—" She faltered. "Can you make me look like yourself?"

He nodded.

"Oh, Willy, Willy, is that really you?"

She waited, staring across the summer air to where he stood relaxed and happy and young, the sun flashing off his hair and cheeks.

A minute passed.

"Well?" he said.

"Wait!" she cried. "Let me think!"

And there in the house he could feel her letting her memories pour through her mind, as sand pours through an hour-glass, heaping itself at last into nothing but dust and ashes. He could hear the emptiness of those memories burning the sides of her mind as they fell down and down and made a higher and yet higher mound of sand.

All that desert, he thought, and not one oasis.

She trembled at his thought.

"Well," he said again.

And at last, she answered.

"Strange," she murmured. "Now, all of a sudden, twenty-four hours, one day, traded for ten million billion years, sounds fair and good and right."

"It is, Clarinda," he said. "Oh, yes, it is."

The bolts slid back, the locks rattled, the door cracked. Her hand jerked out, seized the bottle and flicked back in.

A minute passed.

Then, as if a gun had been fired off, footsteps pelted through the halls. The back door slammed open. Upstairs, windows flew wide,

as shutters fell crumbling to the grass. Downstairs, a moment later, the same. Shutters exploded to kindling as she thrust them out. The windows exhaled dust.

Then at last, from the front door, flung wide, the empty bottle sailed and smashed against a rock.

She was on the porch, quick as a bird. The sunlight struck full upon her. She stood as someone on a stage, in a single revealing motion, come from the dark. Then, down the steps, she threw her hand to catch his.

A small boy passing on the road below stopped, stared and, walking backward, moved out of sight, his eyes still wide.

"Why did he stare at me?" she said. "Am I beautiful?"

"Very beautiful."

"I need a mirror!"

"No, no, you don't."

"Will everyone in town see me beautiful? It's not just me thinking so, is it, or you pretending?"

"Beauty is what you *are*."

"Then I'm beautiful, for that's how I feel. Will everyone dance me tonight, will men fight for turns?"

"They will, one and all."

Down the path, in the sound of bees and stirring leaves, she stopped suddenly and looked into his face so like the summer sun.

"Oh, Willy, Willy, when it's all over and we come back here, will you be kind to me?"

He gazed deep into her eyes and touched her cheek with his fingers.

"Yes," he said gently. "I will be kind."

"I believe you," she said. "Oh, Willy, I believe."

And they ran down the path out of sight, leaving dust on the air and leaving the front door of the house wide and the shutters open and the windows up so the light of the sun could flash in with the birds come to build nests, raise families, and so petals of lovely summer flowers could blow like bridal showers through the long halls in a carpet and into the rooms and over the empty-but-waiting bed. And summer, with the breeze, changed the air in all the great spaces of the house so it smelled like the Beginning or the first hour after the Beginning, when the world was new and nothing would ever change and no one would ever grow old.

Somewhere rabbits ran thumping like quick hearts in the forest.

Far off, a train hooted, rushing faster, faster, faster, toward the town.



Six hundred and four left out of the billions, and the task they set themselves was this: set down in eternal form a record of the glories of Mankind's achievements—and leave it for the others.

LIKE YOUNG

by Theodore Sturgeon

HERE IN THE MOONLIGHT I SIT, assigned to write an ode. I won't write an ode. I'll write . . . I'll write what happened instead. I'll never write another ode. I'm a throwback. I'm a grinning savage, as of this day. And they won't believe me, and they'll laugh—or they will believe me, and then by the powers I think I'll laugh. I think I will. I think I can.

Or cry. I think I can.

I know: I'll write it with all the background, just as if there was somebody left on earth who hadn't lived with it up to this moment. I just want to see if one narrative can contain all of an enormity like this.

The Immune—that's what we're called. But that's a misnomer. We got it, all of us. It's just that we didn't die of it. So, although Mankind was dead, we weren't just yet.

Mankind was dead . . . Humanity wasn't. I guess these things are open to definition. There were, by the time we got them all together, six hundred and four of us left of all the billions. We were all strong and healthy, and most of us young. We could live, learn, love. We could not propagate. So much for Mankind.

We were, all of us, devoted to a single idea, and that was that Humanity should not perish. Humanity in the sense of aspiration, generosity—if you like, nobility: that was what we were dedicated to preserve. It was too late for us to use it. We'd only just realized what it was, when the new encephalitis appeared. Perhaps we realized it *because* the encephalitis appeared. However we came by it, we had it, and we had to pass it on, or it was all too ludicrous a tragedy.

We decided to give it to the otters.

Like many another simple truth, the fact that the otters would be the next ones had been obvious and

undisclosed. We were bemused by the fact that other animals—dogs, for example, and the higher apes, and (remember how exciting that was?) the contemplative porpoise—they all had intelligences like ours, in kind if not in quality. It was possible to think like a porpoise, or like a dog. It was a high conceit indeed to assume that the Next One would have an intelligence like ours. Once we were ready to discard that cocky notion, it became clear that the otter, a tool-using animal far earlier in its evolution than we had been, and possessed of a much more durable sense of humor, was logically our successor.

We despaired for ourselves; I want to make that quite clear. Our mourning was deep and bitter. But it must be made quite as clear that we passed through this mourning and emerged on the other side, as befit our maturity. We emerged late, and, for ourselves, uselessly; but emerge we did, mature we had become. You see what we were, for all our individual youth. We were the Elders of earth, and carried our insigne with a very real dignity. Too, we were each of us, all of us, wealthy and powerful beyond the wildest imaginings of anyone, ever—there were so few of us, so well trained, with such resources (and no need to save). Any of us could wave a hand and move a mountain. Yet the big thing—the real thing—was that sense of purpose and of dignity we had brought through the terror and the death; a greater purpose, and a dignity more real, than (but for a feeble flicker or two) mankind had ever known before. Proud we were, of course; but pride is a silly little word to use for such a thing. Humbly, we liked ourselves. And it was this above all we were dedicated to keeping alive. The otters would have civilization, with or without us, probably, but the achievement of this ultimate *dignity*—ah, that was something we alone could teach them. Only a Man could reach that height. Death gave us this noble knowledge. Life—the New One's life—gave us this purpose. And now they would have it in their own lifetime.

And what a task it had been! For we were too advanced, and the otters far too primitive, for us to impress anything upon them while we shared the earth with them. We would be dust for many thousands of years before they began to communicate even with one another. We had no intention of speeding up their pre-history. Let them be what they were, strong, adaptable, ubiquitous. Let them content themselves with floating on their backs, holding shellfish on their chests, cracking them open with a stone, until the day came when of their own accord they found that was not enough. Let them kindle their own light.

But we were determined that once it was burning it should never flicker or dim. There would be no dark ages for the otters. We would reduce basic knowledge to its essenses, put these in the most understandable form, and leave them like milestones (a statement and a promise, each) along the way.

For the milestones we chose the new alloy 2-chrome-vanadium-prime, which came to be called bicrovalloy. (Ah, what cities that might have built!) Properly fabricated, it could be formed into rods, bars, sheets; once irradiated, it would not, almost could not, change its form or state. This was no molecular lattice, nor even a net of atoms. It can best be described as a matrix of nuclei. Then thirty-foot sheets, supported only at the edges, could bear thousands of pounds at the center without bending more than a few thousandths. A hundred feet of quarter-inch rod, held horizontally by one end, showed no detectable sag. Drawn to a point, it would write on diamond as on wax; plates of it cooled to within a few thousandths of a degree of absolute zero and—or—raised to twenty million degrees, showed only a slight improvement of their finish. And what a finish! Silver-gilt, with a touch of peach . . .

On plates of bicrovalloy, then, man's wisdom was scribed. The task was enormous, but it was the only task we had. We had first to amass the necessary knowledge, then to distill it (and distill it again, and again, and again), and finally to codify it in such a way that the new race, the parameters of whose intelligence we could know only vaguely, would when ready for it be able to take and use it. When they had mastered fire, they must have ceramics. When they began working metal, they must have alloying and heat treatment. At a certain point in this mastery, they must be given knowledge of the power of steam. And so on. But nothing, if possible, before they were ready.

Placement of bicrovalloy plates, bearing the pertinent simple illustrations, in pottery-clay pits was self-evident, concealing them in likely lodes of minable metals was not so easy, for they must be hidden far enough down to make sure that their discovery was no accident. We gave language, numbers. And the ultimate secrets—ethical, spiritual as well as technological—these must be triply concealed, so that they would come out as a series of revelations, each a discovery, each a hint of the next, with everything in our power done to ensure they get it neither too soon nor, through over-concealment, not at all.

And so it was that the four equations of Einstein's General Field Theory, together with Heisenberg's addenda, were placed in the most inaccessibe vault of all—in

the mantle of the earth itself, in the bottom of the great bore under two miles of ocean where, in the twentieth century, we had reached our peak as engineers, seekers after knowledge. I need not go into the details of this ultimate achievement. For all our dedication, our immense resources, and our newer techniques, it was far harder for us to reach the bore than it had been for our forefathers to dig it.

The concealment of this final bicrovalloy plate was (it seemed at the time) our climactic conquest. I look back on those days with affection and sadness. It was a time of contemplative pride. We kept busy, of course, but our work was done. We had, in a fashion, survived our own death. We existed in a timeless moment, neither afterlife nor immortality, after the end of one great flowering and before the beginning of another. Humankind, the very death of humankind—that was behind us. The otters had not even begun; this was eons before their birth as the Next Ones. So in this period we walked proudly, humbly conscious of our true usefulness and nobility. We had carried the torch.

And then—

Then De Wald produced the last equation.

De Wald had worked ceaselessly even before our project had begun, even before the first recorded case of the new encephalitis had claimed the first of its billion of victims. His material was the remarkable mathematical achievements of Heisenberg, and his goal a single expression which would not only encompass Einstein's four, but which would distill even Heisenberg's into something as clear as $e=mc^2$.

We had conferences and excited discussions, of course, but they were ritual (we had time for ritual then, and a great liking for it); everyone knew what was to be done. We had known because of the supreme *rightness* of such a discovery at such a time. Some talked about poetic justice and some about God; myself—I am not a scientist—I attributed it to Art. For our kind to end with a whimper, to be proven futile, or to have our work left in any way unfinished—this was Bad Art. De Wald's discovery, on the other hand, coming at just this time, was Art at its peak. One might almost say it justified everything, viewed objectively—even the tragic death of mankind. In a million years, through the eyes of another species, this would be the greatest story ever told . . .

Joyfully we set about the sizable task of recovering the now outdated set of bicrovalloy plates from the very flesh of the earth's body. And meanwhile the new plate was prepared—the old one could not be changed or added to, of course. Oh, it was good, good to be back at work again!

Then we were ready for the final placement. This of all times was the time to have a ceremony, and we planned a beautiful one. Grogerio himself would compose special music, and naturally no one but Fluger would design the dais on which the recovered plate and the ultimate one would lie side by side during the ceremony. And I was not in the least surprised when they came to me for an ode. Not in the least reluctant, either: for if created art comes from inspiration, surely there was enough and to spare in such an assignment.

I requested that I be left alone at the beautiful seaside spot on the night before the ceremony. I had already done a draft of the ode, but I knew what that vigil would do for the final version.

And indeed, the whole mood of the place and the time was perfect for such an effort. The last of the people left late in the afternoon, and I made myself comfortable in a spot where I could, at a glance, take in sea and sky, the silver beach and Fluger's beautiful dais, raised on two of his dizzying, gravity-defying arches. The *rightness* I mentioned earlier—this was a case in point. It has been said many times that neither a Fluger arch nor bicrovalloy could exist without the other.

And the sun went down in a blaze: how right! Even as we . . .

And in the east, a leaching of the firmament, and the loom of the moon . . . to be a new light on earth . . .

Then, wonder of wonders, there was a splash in the whispering surf and a small blackness oozing through the illumined dark. Oh, I thought, awe-struck: it can't be, but . . . yes; nothing could be more right . . . and then the moon struck upward with its metal edge, and cracked the cup of darkness, and I could see I was right in this rightness—it was a large male sea-otter snaking through the sand, working up toward the dais.

Exactly facing me, and not thirty yards way, he froze; had I not known where he was, I might have taken him for a hummock of sand or its deepening shadow. But I did know where he was, and in the growing light I could see the sensitive twitch of his comic mustache. I was not deceived as to the subject of his gaze, either, for I know his kind. An otter never looks directly at anything, any more than a bird does. One eye was regarding his beloved sea, and the other the dais. I, directly ahead of him, was unsuspected. And how perfect a picture this made, in all its symbolisms . . . how very right!

He turned in his quick lithe way and scuttled toward the dais, occasionally stopping in the otter's brief sudden pauses, as if one of his motivating wires were loose at the battery.

Silently, bemused and bemagicked, I followed. For in a mo-

ment like this, it must be so; it must be so: I alone — I, possibly the most perfectly qualified person on Earth and in all history to appreciate such a priceless picture, I would see this minion of the far-distant New Ones in the very shrine of all that was highest of Humanity.

And of course I was right—I was right—what could go wrong with such an enchantment? All the Powers of all the Souls of all Good Art would not permit anything, in such a moment, but what was right.

The otter, when at last I had crept round the dais and up behind the curtains and could see him, crouched motionless before and between the two bicrovalloy plates, the one just recovered, bearing Einstein's and Heisenberg's revelations, and the other which had just been fabricated to replace it.

I thought (a very whisper of a thought, lest I think too loudly and ripple this tableau): Are you praying, little one?

The otter rose suddenly on his hind legs and put his forepaws on the reclaimed plate. He seemed, in his clumsy, fumbling little way, to be caressing its surface. And the strangest feeling came over me, of shame, of that special kind of guilt one feels on having committed a faux pas, a *gaffe*, an in-itself petty kind of social offense which nonetheless it is acutely painful to remember. I felt like an intruder, a spy of the most ignorant and clumsy sort. To spare myself any more to brood on in the future, I removed the one wrong thing in that symphony of rightness—myself. Noiselessly I sank down behind the curtain and slipped into the sand below, and I was congratulating myself on being perhaps alone among men to have such perfect sensibility.

Rather than disturb him at whatever accidental orisons he was performing up there above me, I sat quietly until at last I saw him scampering off toward the sea. He had snatched up some bit of trash or jetsam from somewhere, and I saw him digging at the water's edge with it. I could just make out the two plump clams he unearthed, and then he was gone into the surf. I rose to catch, perhaps just once more, a single last glimpse of this creature, fellow to my most magic moment, and (as was only right) I did. He was floating joyfully on his back in the moonlight, with a clam on his strong chest. He struck it deftly with his crude tool, gulped it from the shattered shell, threw his unwanted trash upward into the moonlight, and was gone beneath the waves.

I gazed after the graceful clever little rascal, loving him. . . and turned toward my vigil-spot, all abrim with inspiration . . . and had I gone there, I surely should have written one hell, one hell of a *hell*uva ode . . . but instead I strode

back up on the dais, to relive that incredible moment.

In the brilliant moonlight I gazed down at the shrine of humanity, all its dignity and its worth, and at all the meanings of this mighty gesture of faith in the life that had been and the life that was to be, when my eyes took in . . . took in what, some unmeasured time later — it might have been an hour—my mind was able to take in . . .

. . . just to the right of Einstein's brief immortal perfect statement of mass-energy conversion, the comment,

WELL, SOMETIMES

written on, *written into the bicrovalloy plate.*

And there were two corrections in the Heisenberg statement, strike-outs and carelessly scribbled figures which seemed to have been scribed deep in the impervious metal by a single small foreclaw . . .

But it was what had been done to the new De Wald plate that dealt me that blinding blow, from which I recovered (was it an hour later?) so slowly. For under that climactic, breathtaking achievement of intuitive mathematics, that most transcendental of all human statements, the De Wald Synthesis, the otter had scrawled:

NONSENSE!

I write no more odes. As for you who find this, and the plates which are its proof, do as you will. Have a suicide wave if you like. Or gather round in chittering groups and make wild surmise about the true source of the encephalitis which destroyed us, and great agonized guesses as to whether the otter was truly not quite aware of my presence and the significance of these plates and this whole occasion, and as to whether he and his kind are or are not impatient for our little remnant, with all our powers and resources, to be broken and maddened and die and go away. Or send your divers out if you like, to salvage that which he used to crack a clam—it's out there, not far—and prove to yourself that it is indeed the corner he broke off the De Wald plate with his bare paws; pick it up and fit it back again and pass it around and turn your silly laboratories loose on it. Maybe some of you will finally begin to roar with laughter, sob with merriment, as I have done to the point of exhaustion and helplessness, unable to get out of your minds the enormity of this one ridiculous fact: How *childish* is his handwriting! . . . so go do any of these things, or none of them, or something, out of the vast store of your pride and knowledge, of your own devising.

But me, I'm a joyful throwback . . . I'm one with my eager ancestors:—I'm going hunting.

*A new short novelet by the deft, incomparable author of that cornerstone of any imaginative library—*FANCIES AND GOOD NIGHTS. *It is in its own very special, totally unexpected way, the most persuasive argument we have heard for the actuality of a phenomenon often discussed in science fiction circles.*

MAN OVERBOARD

by John Collier

GLENWAY MORGAN ABBOTT HAD the sort of face that is associated with New England by those who like New England. It was so boney, so toothy even, so modest, so extremely serious and so nearly flinchingly unflinching, that one hardly noticed that he was actually a very good-looking man.

He also had the yacht *Zenobia,* which was handsome enough to take one's breath away at the very first glance; it showed its seriousness only on a closer inspection. Once in a very great while, I used to go on a long cruise with Glenway. I was his best, and his only intimate, friend.

Those who have seen the *Zenobia,* or seen even its picture in books on sailing, may be impolite enough to wonder how I came to be so specially friendly with the owner of a three-masted schooner which is certainly among the dozen, perhaps among the half dozen, most famous of the great yachts of the world.

Such people should realize that, though I may lack wealth and grace and charm, I do so in a special and superior way. Moreover, in spite of the glorious *Zenobia* and the impressive associations of his name, Glenway's way of life was far from being sophisticated or luxurious. His income, though still very large, was only just large enough to pay for her enormous upkeep and her numerous crew. When he wanted to get a piece of research done, he had to dip into his capital.

The fact is, Glenway had at one time been married, and to a film star, and in highly romantic circumstances. As if this wasn't enough, he had at once got divorced. The star in question was Thora Vyborg, whose beauty and

personality are among the legends, or the myths, of our time. All this happened before I met him, but I had gathered, though not from Glenway, that the divorce had been distinguished by a settlement such as can only result from the cruellest heartbreak, the bitterest injury and the most efficient lawyers on the one side, and honest eyes and rather prominent front teeth on the other.

Therefore if the word yacht suggests music, ladies, awnings, white-jacketed stewards, caviar and champagne, the suggestion is altogether misleading. The only music was the wind in the rigging; there were no ladies; the solitary steward wore no jacket, and the crew wore no shirts either. They were all natives of different parts of the Pacific with different complexions and different tongues. The language used on board was a sort of sub-basic English, adequate for work, expressive in song, but not very suitable for conversation. Glenway might have had an American or a British captain or mate; however, he did not.

Anyway, every man on board knew his job. It was a pity that the cook's job was all too often only the opening of cans of frankfurters or baked beans. This was not so much due to New English frugality as to that gastronomical absent-mindedness which is so often found linked with honesty, teeth and devotion to a cause.

Glenway was devoted to a cause, and so was the *Zenobia*. All these great yachts are, of course, capable of ocean cruising; this one was used for it, and for nothing else at all. She was used and hard-used, and, though as clean as a pin, she was by no means as shiny. On the horizon, she looked like a cloud; at her mooring like a swan to the poetically minded, or to the materialistic, like a floating palace. But as soon as you stepped aboard she had more the appearance of something sent out by an oceanographical institute. All manner of oddly shaped nets and trawls and scoops were hung, or spread or stowed around her deck. On either side of the foremast there were two objects on pedestals, shoulder high, and made of that ugly, grey, rust-resisting alloy which was used everywhere on this boat in place of brass or chromium. These objects were not ventilators. They had rotating tops; these tops were hooded or cowled, or whatever you'd call it, and closely shuttered against the salty spray. If you turned one of the tops towards you, and slid open the shutter, and looked inside, you would find yourself being looked back at, quietly, by the darkly gleaming eye of a movie camera.

Up in the bow there was a bulky object lashed down under quickly removable canvas. This was a searchlight. Long chests, seated high, almost as high as the

low gunwale into which they were built, contained rockets and flares. Glenway was hoping to photograph something which he believed might be nocturnal in its habits. He thought that otherwise, being a very large, noticeable creature, and being a reptile, and breathing air, it would have been seen more often by daylight.

Glenway, in a word, was looking for the sea-serpent. As he detested the sensational newspaper stories and the tiresome jokes associated with the term, he preferred to think of it as a *large marine saurian*.For short, we called it, not inaptly, *it*.

People all over the Pacific knew of Glenway's quest. They were, though tactful about it, rather too obviously so. Something about Glenway caused them to refrain from guffaws; but they put on leaky masks of politeness over their grins, or, if they took the matter seriously, they seriously sought to reclaim him from his folly. Either way, they made it all too clear that they thought him a crank and perhaps a zany because he believed in such a creature. For this reason he avoided ports as far as possible, and when taking in supplies or docked for overhaul he avoided the society of his kind. Now it so happens that, though I am of sceptical nature in most matters, I am strongly inclined to suspend disbelief when it comes to a large marine saurian. Without at least the possibility of such a creature, it seems to me that the world would be a poor and a narrow place. Glenway perceived this at our very first meeting, and it was the reason for at least the beginning of our friendship. I was forced to tell him I thought the chances were a million to one against him ever seeing his quarry, and I thought he was crazy to waste his time and his lovely money on hunting for it. This didn't worry him in the least.

"I shall find it sooner or later," said he, when first we debated the question, "because I know where to look."

His theory was a simple one, and made sense up to a point. If you know how an animal is constructed you can deduce a great deal as to how it lives, and especially as to what it lives on. When you know what it eats, and where that particular food abounds, you have already a very good clue as to where to look for it.

Glenway had taken all the best authenticated reports, and he had an outline drawn up from each of them. Almost all these reports, from whatever corner of the world they may come, describe more or less the same sort of creature, so he had no trouble in getting a composite picture made by an expert hand. This, of course, showed a reptile of the plesiosaur type, but very much larger than any of the fossil plesiosaurs, being only a

few inches under eighty feet in length. But here there was a snag.

Glenway had every reason to know what each extra foot on the length of a yacht adds to its maintenance bills, and he knew that an eighty foot plesiosaur is not a practicable proposition. It was not hard to calculate what its weight would be, or the size of its bite, or how large a fish could pass down its narrow gullet. "It would spend more energy just picking up fish of that size one by one," said Glenway, "than it would gain by eating them. Also, schools of herrings, mackerel, haddock and so forth are mostly found in coastal waters, and fishermen have been after them by day and by night ever since fishermen existed. An air-breathing creature has to show itself on the surface fairly often; if it followed fish of that sort it would be as familiar to us as the barking shark. And finally, it would be extinct, because with those jaws it couldn't defend itself against killer whales, or threshers, and certainly not against the big sharks of the late Pleistocene."

"Glenway, if all this is correct, you've slain your own goddam Jabberwock."

"I was afraid I had," said he. "It depressed the hell out of me. But one day it struck me that people who see something very surprising, in bad visibility and so forth, will naturally tend to exaggerate the most surprising aspect of whatever it is they see. Thus an astonishingly long, snakey neck will look longer and snakier than it actually is, a small head smaller, and so forth. So I had a couple of young chaps from uncle Fred's Institute of Industrial Psychology do a series of tests. They found a deviation running up to about twenty five percent. Then I told them what I wanted it for, and asked them to modify this outline accordingly. We got this." He handed me a second sheet. We can take it this is what was actually seen."

"Why, this damned thing's only sixty feet long!" said I rather discontentedly. "It seems to me you're correcting eye-witness reports on pure speculation."

"No, I'm not," said he. "I double-checked it. I hired a reptile man and an icthyologist, and I asked them to work out what the nearest thing to a sixty-foot plesiosaur would be like if it were to be a practical proposition in terms of food, energy, defence and all that. They came up with two or three alternatives; the one that interested me was this." He pulled out a third outline. "If you put this on top of the psychologists' version," said he, "you'll see they correspond in everything essential."

"All the same, if I'm going to believe in a large marine saurian, I'd rather have an eighty footer."

"This one weighs more than an eighty footer," said Glenway, "and

he's probably ten times as powerful. Those jaws have a bite of over three feet. This fellow could swallow a barracuda at a gulp. He might have to make two snaps at a porpoise. He'll follow schools of tuna, albacore, any sort of fish ranging from fifty to a hundred and fifty pounds. Not cod, of course."

"And why not cod?"

"Fishermen. He'd have been seen."

"Oh!"

"So evidently he doesn't follow cod."

"And evidently you can sweat a positive out of a couple of demolished negatives. Even so, it may make some sort of sense."

Glenway accepted this, which at least was better than he got from other people. He eagerly showed me innumerable charts he had drawn up, and had amended by his own observation. These showed the seasonal movements of deep sea fish in the east Pacific, and where these movements weren't known he had what data there was on the smaller fish that the larger ones preyed on. He went on down through the food chains, and down to plankton drifts and current temperatures and so forth, and with all these, modified by all sorts of other factors, he had marked out a great oval, with dates put in here and there, which tilted through those immense solitudes of ocean which stretch from the coast of Chili up to the Aleutians.

This was his beat, and two or three times I sailed it with him. There were almost no islands, almost no shipping lanes. I used to take a regular spell in the crow's nest; two hours in the morning and two more in the late afternoon. You can't sit day after day looking for something without an admission, deep in your mind, of the possibility of seeing it. Anyway, I was extremely fond of Glenway, and it would have given me great pleasure to have been the one who sighted his saurian for him somewhere far out on the flat green or the rolling blue. The very wish lent a sinewy twist to every water-logged palm trunk that drifted across our bows, and every distant dolphin leap offered the arc of a black, wet and leathery neck.

At the first sight of such things, my hand, more wishful even than my thoughts, would move towards the red button on the rail of the crow's nest. This, like another in the bow, and a third by the wheel, was connected with a loud buzzer in Glenway's cabin. However, the buzzer remained silent; the immense horizon, day after day, was empty.

Glenway was an excellent navigator. One morning when I was aloft he called up to ask if I could see anything ahead. I told him there was nothing, but I had no sooner raised my glasses again

than I discerned a thickening, a long hump gathering itself in the infinitely faint pencil line that marked the juncture of sky and sea. "There's something. It's land! Land ahead!"

"That's Paumoy."

He had not bothered to mention that he was going to touch at Paumoy, the main island of an isolated group north-east of the Marquesas. I had heard of the place; there were eight or ten Americans there, and someone had said that since the war they almost never got their mail. Glenway's boat took him within fifty miles of the island, and he now told me he had agreed to touch there as he passed. Sensitive as he was to crude jokes about the sea serpent, he was still a New Englander, and he felt that people should have their mail.

The island, as we drew nearer, revealed itself as several miles of whale-back, covered with that hot froth of green which suggests coconut palms and boredom. I put down the light binoculars I was using and took up the telescope, which had a much greater range. I could see the harbour, the white bungalows spaced out around it, and I could even see the people quite clearly. Before long I saw a man catch sight of the yacht. He stared under his hand, and waved and pointed; another man came out of a bungalow with a pair of glasses. I saw the two of them go off at a run to where a jeep was standing. The jeep crawled off round the harbour, stopped at another bungalow; someone got out, someone got in. The jeep moved off again, disappeared into a grove, came out on the other side, and went toiling up a little thread-like track until it went out of sight over the ridge.

By this time other people on the shore level had turned out to look at us. They had plenty of time to do so, for the breeze fell off almost to nothing as we stood in towards the island. It was already late afternoon when the *Zenobia,* with every sail set, floated as softly as an enormous thistledown to her anchorage in the harbour of Paumoy.

"What a dreary-looking dump!" I said. "What do they do here? Copra?"

"That, and shell. One fellow dries a sort of sea-slug and sells it to Chinese dealers all over the world. There was a Gauguin from San Francisco, but he didn't stay very long."

"You'd think they'd cut each other's throats out of sheer boredom."

"Well, they play poker every night of their lives, and I guess they've developed a technique of not getting on each other's nerves."

"They must need it." There seemed to be nothing on the island but coconut palms, which I don't like, and the blistering bungalows, all of which might have been prefabricated by the same mail-order

house. What I had taken from a greater distance to be banks of vari-coloured flowers beside the bungalows, were now recognizable as heaps of tin cans, some rusty, some with their labels still on.

But I had no more time to look about me; we were on the quay, and being greeted by men in shorts and old-fashioned sun helmets, and the greeting was hearty.

"Now listen to me," said Victor Brewer, "we've got two new guys here who've been in Java. We've had them working like dogs ever since we sighted you, fixing a *rikstafel*. So you've got to stay to dinner. Or those guys are going to be hurt. Hell, you're not going to insult a couple of fellows who are slaving over a hot stove, fixing you a dinner."

Glenway wanted nothing but to pick up the outgoing mail bag and be gone. On the other hand he hated the idea of hurting anyone. He looked at me as if in the faint hope that I might step in and do it for him. It was at such moments, very rare with Glenway, that I felt Fitzgerald was right about the rich being different, or half right, or a quarter right, and the thought of this, and the thought of the *rikstafel,* prevented me from obliging him. Instead, I pointed out there'd probably be no wind till nightfall, so we'd be losing hardly any time. Glenway at once surrendered, and we settled down to drinks and chat.

Listening to the chat, I remembered Glenway's remark about the technique of nŏt getting on each other's nerves. It seemed to me that this technique was being exercised, and especially for Glenway's benefit. At the end of almost every remark our hosts made I felt myself dropping in the air pocket of a pulled punch; I experienced that disconcerting absence of impact which is the concomitant of velvet paws. It was clear they knew what Glenway was after, and they even referred to it, but with such collective tact that if one of them seemed likely to dwell on it for more than a few seconds he would be steam-rolled out of the conversation, generally by Mr. Brewer. It was he who asked, very casually, when we had been sitting some time at dinner, if Glenway was sailing the same course as usual; if he was going to pass, give or take a hundred miles, the northern extremity of Japan.

Glenway having replied that he always followed the same course: "You know," said Vic Brewer, letting the words fall as casually as one lets fall the poker chips when the hands are high and the stakes are higher, "You know, you could do the hell of a good turn to a guy. If you felt like it, that is."

"What sort of a turn?" asked Glenway. "And which guy?"

"You don't know him," said the man on Brewer's left. "He's a fellow called Geisecker. He's Char-

lie's brother-in-law's brother-in-law, if you can work that one out."

"He dropped in here to say hello," said the next man. "He came on the copra boat and he didn't know the mailboat doesn't call any more. So he's stuck."

"The point is, this poor guy is going to be in big trouble if he doesn't get to Tokyo in the next few weeks."

"When you get up in those latitudes you're certain to sight some boat or other bound for Japan."

"Any little tramp; a crab fisher or anything. He'll be tickled to death."

They spoke one after another all the way round the table, and, remembering that Glenway had said they played poker every night of their lives, I was irresistibly reminded of the process of doubling up.

"We hate to see him go," said Brewer, collecting the whole matter into his hands with the genial authority of the dealer. "He's wonderful company, Bob Geisecker. But it's almost life or death for him, poor fellow! Look, he'll pay for his passage—anything you like—if *that's* the obstacle."

"It isn't that," said Glenway. "But I haven't seen him yet."

"He's over on the other side of the island," said Brewer. "He went off with Johnny Ray in the jeep less than half an hour before we sighted you."

"That's funny," said I, thinking of what I'd seen through the telescope.

"Damned funny," said Brewer, "if going off to give Johnny a hand makes him miss his chance of a passage." And turning to Glenway, he added. "If you'd only seen old Bob I know you'd have been glad to help him."

"I'll take him," said Glenway, "if he's back in time. But the wind's been failing us, and we're behind schedule, and . . ."

"Fair enough," said Brewer. "If he's back in time you'll take him. If he isn't, that's his hard luck. More rice? More chicken? More shrimp? Boy, fill up that glass for Mr. Abbott."

The dinner went on and on, and not another word was said about Mr. Geisecker. At last the heavy frondage above the table drew a deep breath and began to live and move. The wind was up, and Glenway said we could wait no longer. We all walked together down to the quay. Glenway and I were just stepping into the dinghy when someone pointed, and looking back, as people were rightly warned not to do in the old stories, we saw, like a moonrise, the glow of headlights in the sky. The jeep was coming up on the far side of the ridge. "That's Bob," said Brewer. "But don't wait. We'll get him packed up in no time, and bring him out in the launch before you can up anchor."

Sure enough, just as we were ready to move out, the launch came alongside with Mr. Bob Geisecker and his bags. The latter had pieces of pajamas hanging out at their sides like the tongues of panting dogs. Geisecker himself seemed a little breathless. His face, as he came up the steps into the light hanging above, had something strange about it. At first I thought it was just the flustered and confused expression of a man who had to pack and get off in such a hurry; then I thought it was the fact that, after weeks and months under an equatorial sun, this considerable face still peeled and glowed as if fresh from a week-end at Atlantic City. Finally, still unsatisfied, I thought of that massive, opulently curved, wide-mouthed instrument which is included in every brass band, and which, when it is not playing at full blast, looks as if it ought to be, or at least is about to be. Mr. Geisecker greatly resembled this instrument, but he was very silent, and it was this that was strange.

There was a quick introduction, a brief welcome from Glenway, who was busy, an uncertain mumble of thanks from our guest, and a very hasty farewell from Brewer. Glenway had to give all his attention to taking the yacht out, and Geisecker stood neglected on deck, staring after the launch, his mouth open, looking something worse than lost. I took him down to his cabin, told him we breakfasted at seven, and asked him if there was anything he wanted before turning in. He seemed only vaguely aware that I was talking to him.

"Those guys," said he, speaking like a man in a state of shock, "I kept them in stitches. In stitches—all the time!"

"Good night," I said. "I'll see you in the morning."

Next morning Geisecker joined us at breakfast. He acknowledged our greeting soberly, sat down and looked at his plate. Glenway apologized for having been so much occupied overnight and began to discuss where and when we might hope to encounter a boat headed for Tokyo or Yokohama. Geisecker lifted a face on which dawning enlightment made me think of the rapid change from the blue-grey hush of the tropic night to the full glare and blare of tropic day; light, warmth, life and laughter all came flooding in faster than one would think believable or even desirable.

"I knew it all the time!" said he exultantly. "Only I just didn't happen to think of it. I knew it was a gag. When those guys hustled me aboard this lugger I got the idea they were—you know—giving me the brush-off. They just about had me fooled. Now I get it. Anything for a laugh! They swore to me last night you were heading for Lima, Peru."

"They told me very definitely," said Glenway, staring, "that it was of the greatest importance that you should get to Tokyo."

Geisecker slapped his plump and crimson thigh with startling effect. "Those guys," said he, "they'd ship a fellow to the moon on one of these goddam spaceships if they could get a laugh out of it. And that's what they've done to me! Tokyo's where I came from. Lima, Peru is where I was going to move on to. *That's* why they kept me all day over on the other side of the island. So I shouldn't hear which way you were going."

"We're short of time," said Glenway, "but I'll put about and take you back to Paumoy if you want me to."

"Not on your life," said Geisecker. "It's a good gag and I'll be goddamned if I spoil it. All I'm doing is just going around the world saying hello to people, and to tell you the truth there's a little kimono lady back in Tokyo I shan't mind saying hello to once again." With that he obliged us with a few bars from *Madame Butterfly*.

"Glenway," said I, "it's just on eight. I think I'll be getting up aloft."

"Aloft?" cried Geisecker. "That sounds like the real salt water stuff. I've never been on one of these wind-jammers before. You've got to give me the dope on marlin-spikes, splicing the main-brace and all the rest of the crap. I tell you, boys, I'm going to learn to be a sailor. Now what's all this about going up aloft?"

"I'm just going up to the crow's nest for a couple of hours."

"What for? Looking for something?" Even as he asked the question he turned, first on me and then on Glenway, a face which now resembled a Thespian as well as a porcine ham, it so overacted the simple feat of putting two and two together. Fixing his eyes on Glenway, he slowly raised and extended an index finger of great substance. The lower joint of this finger was adorned with curving hairs, very strong and serviceable and of a ruddy gold which glinted in the morning sun. The finger stopped about a foot short of Glenway's ribs, but its quality was so potent that it seemed to make itself felt here. In fact, I even felt it in my own.

"Abbott!" cried Geisecker triumphantly. "Now that shows you how miffed I was last night when I thought those guys had given me the brush—it didn't ring any sort of a bell. Glenway Morgan Abbott! Christ, I've heard about you, pal. Those birds told me all sorts of yarns. *You're* the guy who goes around looking for the sea serpent!"

At this point he became aware of Glenway's regard, which was, for one naked moment at least, quite deadly. Geisecker drew back a little. "But maybe" said he,

"maybe they were pulling my leg. I ought to have seen it right away. A fellow with your education wouldn't fall for that cheesy old bit of hokum."

By this time Glenway had recovered himself, which is to say that he was once more subject to his customary inhibitions and compulsions. These forbade him to be discourteous to a guest; and forced him to bear witness like a zealot in favour of his large marine saurian. "Perhaps," said he, after a painful swallow or two, "you haven't considered the evidence."

He went on to summarize the affidavits of numbers of worthy citizens, all describing what was obviously the same sort of creature, seen at widely dispersed times and places. He stressed especially the sworn evidence of naval officers and sea captains, and crowned the list with a reference to the reptile clearly seen by the bearded and impeccable gentlemen in charge of Queen Victoria's own yacht, the *Osborne*.

Geisecker who had been listening with a widening smile, here heartily slapped Glenway on the back. "You know what it was *they* saw, brother? They saw the old girl herself, flopped overboard for a dip. What do you say, boys?" said he, addressing the question to me and to the man who was clearing the table. "That's about the size of it, believe you me! *Splash me, Albert!*"

He accompanied this last sentence with a flapping mimicry of regal and natatory gambols, which, considering he was neither on a throne nor in the water, seemed to me to show talent. Glenway, like the august personage represented, was not amused. There was such a contest between displeasure and hospitality visible on his face that it looked for a moment like a wrestling match seen on television, only, of course, the pain was genuine.

This, and the thought that I had rather let him down over the dinner on Paumoy, moved me to an unwonted self-sacrifice. "Glenway," said I "you take my spell in the crow's nest, and I'll take the wheel this morning."

Glenway, being one of nature's martyrs, refused this handsome offer, and elected to stay down in the arena. As I went aloft I realized how those patricians must have felt, who, though inclined to early Christian sympathies, were nevertheless pressured into taking a box in the Colosseum on a gala night in Nero's Rome.

Every now and then I heard a roar below me, and it was not merely that of a lion; it was that of Geisecker's laughter. Before long I saw Glenway come forward, and pretend to busy himself with the little nets that were used for taking up plankton and algae. In a very few minutes Geisecker came after him, smiling, and spoke with

jovial camaraderie to the two sailors who were spreading the nets. These men looked uneasily at Glenway before they laughed; it was sufficiently obvious that the jests were concerned with the sea-serpent. Glenway then dropped his work and went aft, and below. Geisecker went bellowing along the deck and, getting no response, he went down after Glenway. There was a period of calm; deceptive calm, which is calmer than the other sort. Then Glenway burst up out of the forward hatch and looked around him as if for refuge. But there is no refuge on a yacht, not even on a yacht like the *Zenobia*. I realixed that he must have slipped through the pantry, into the galley and thence into the men's quarters, leaving Geisecker ditched in the saloon. Geisecker was, of all men, the least likely to remain ditched more than three minutes. At the expiration of that time I leaned far out and looked back, and saw his mighty, sweating torso emerge from the companionway.

There are certain big fat men who, when they joke with you, seem almost to enfold you in a physical embrace. This caused me to wish we were farther from the equator, but it did not prevent me going down to try to run a little interference for Glenway.

I soon found that it was next door to impossible to draw Geisecker away from Glenway. There are certain people who, if they become dimly aware they are offensive to another, will fasten on that unfortunate with all the persistence of a cat which seeks out the one cat-hater in a crowded room. They can't believe it; they think you really love them; they are tickled and fascinated and awesomely thrilled by the fantastic improbabiity of your dislike. They'll pluck at your attention and finger your very flesh for the unbelievable spectacle of your recoil, and they'll press yet closer for the marvel of your shudder, for all the world as if recoil and shudder were rapturous spasms induced by some novel form of love making, to be evoked in wonder and in triumph again and again and again.

"Good old Glen!" said Geisecker, one afternoon when Glenway had jumped up with what I can call a muttered exclamation, and sought refuge in his cabin. "I love that guy. I love the way he takes a bit of ribbing. You know—straight, dead pan, and yet you can tell that underneath he just loves it."

"Not on that subject," I said. "He detests it. And so do I. It's making him miserable. It's driving him just about crazy."

"Ah, don't give me that baloney!" said he with a good-humoured flap of his hand. Geisecker was not in the least interested in what I said about my own reaction. Sensitive to nothing else on earth, he had, unconsciously of

course, better than a dog's nose for the exact nature of the feeling he inspired. This keen sense told him that I am of a type not offended by his sort of humour, and that my mounting anger was entirely on behalf of Glenway. To him, therefore, it was vicarious, second-hand, and as flavourless as a duenna's kiss. It gave him no sort of thrill, and he had no itch to increase it. I felt quite rejected.

I went down to see if I could be more effective with Glenway. I said, "If you had the least sense of humour, you'd enjoy this monster. After all, he's the sort of thing you're looking for. He belongs to a species thought to be extinct."

"I wish to God he was," said Glenway.

"He may not come from the Pleistocene, but he's at least a survival from the Joke Book Age. He's a human coelacanth. He's a specimen of Comic Picture Postcard Man. He's a living Babbitt. You ought to turn your cameras on him. People'll think you're making it all up."

It was like trying to skip and run over soft sand. Each new sentence got off to a worse start and sank deeper into Glenway's depression. At last I was altogether bogged down, and we sat there just looking at each other. Then, like the last trump, there arose an urgent, heart-stopping stridulation in the buzzer box on the wall over the bed. Glenway was out of his depression, out of his chair, into the doorway and up the companion so quickly that one felt certain intervening movements must have been left out. I followed as fast as I could; after all, it was either the sea serpent or Geisecker, and in either case I thought I'd better be there.

It was Geisecker. He was standing by the wheel, hooting with laughter, pointing out over the ocean, shouting, "Thar she blows! Flukes on the starboard bow!"

Then the laughter doubled him up completely. I noticed that it can be true about people getting purple in the face. I noticed also that, even doubled up, Geisecker seemed bigger; there seemed to be more of him, than at other times.

Sadder still, there seemed to be less of Glenway. He seemed to be shrunken and concentrated into a narrower and grayer column of tissue than was natural. I had time to think, "He'll be driven completely out of his mind if this continues," and then he turned and went down the companion out of sight.

I went over to Geisecker, wondering on the way what sort of words could possibly pierce his thick hide. "Jesus Christ!" said he. "I knew it was true. When those boys on Paumoy told me, I knew it was true, but I just felt I had to check up on it."

"What the hell are you talking about?" I asked.

"About old Glen and Thora Vyberg," replied Geisecker, still gasping with mirth. "Don't you know about Glen and Thora Vyberg?"

I knew they had been married. I vaguely remembered something about a dramatic love-at-first-sight encounter in Honolulu. I had some sort of a picture in my mind of the more-than-famous film star; of her unfathomable personality, her unknowable beauty, and the fact that she talked to no one and travelled with no one and dined with no one except her Svengali, her current director, and her publicity man. I had a fairly clear idea of what these types were like, and I could imagine that Glenway, younger then, tall, angular, already dedicated, with the ocean behind him, winged with sail and haloed with sun and money, must have seemed to offer her a part in a rather better production.

I remembered, too, that the marriage had been extremely short lived. Someone had said something about them sailing away with the sunset and returning with the dawn. No statement had been made by either party. There had been rumours, as there always are, but these were weak, uncertain; they had been drowned in a flood of better authenticated adulteries long before I ever knew Glenway. Now it seemed that some of them had been washed ashore, horribly disfigured, swollen and salty, on the ultimate beaches of Paumoy.

"You know what the boys there told me?" said Geisecker watching me closely. "Seems they got married in no time flat and started out on this very same boat, on a big, front-page honeymoon. Believe it or not, the very first night out—round about eleven o'clock, if you get what I mean, pal—some fellow on deck sees something or other, maybe porpoises or kelp or any damn thing you like, and he gets the idea it's the old brontosaurus in person. So he presses the buzzer, and Glen comes rushing up on deck in ten seconds flat. Don't ask me any questions, pal; all I know is that first thing next morning the lugger was turned right around, and it's full steam ahead back to Honolulu, and Reno, and points in opposite directions."

I realized at once that this was true, and had a certain beauty. However, that was for my private contemplation and had nothing to do with Geisecker. He was regarding me with a sort of arrested gloat, his eye triumphant and his nose tilted up ready to join in the expected peal of laughter. "Geisecker," I said, and for the first time I heard, and he heard, a note of direct and personal hatred in my voice, "Geisecker, I'm not going to discuss the whys and wherefores, but from now on you're going to stay right away from Glenway. You can come on deck; you

can have a chair on the port side there, between the masts. But if you step one inch . . ."

"Hold it!" said Geisecker. "Who's talking? The owner? Skipper? First mate? Or what the hell else do you think you are? I'd like to hear what old Glen's got to say."

I am no good at all at a row. When my first damp squib of wrath has exploded I am always overwhelmed by an immense weariness and blankness. At that moment I had neither the will nor the power to go on. But Geisecker obligingly came to my assistance. I could never decide whether he was a sadist, avid for the discomfort of his victim, or a masochist, indecently eager for the wound of being disliked. Whichever it was, he watched me with his little eye, and he actually passed his tongue over his lips. "Anyway," said he, "I'm going down to ask him if there's any truth in that yarn."

The lip-licking was so crude and so banal that it transposed everything into a different key. There was a sailor of great good nature and phenomenal size, a man called Wiggam, a native of Hawaii, who was mending a net a little way along the deck. I called him and told him, in phrases which normally appear only in balloons in comic strips, to take his net and work on it outside Abbott's door, and, in the event of Geisecker approaching that door, to cut his belly open.

I gave these deplorable instructions in a rather cold, stacatto tone, assumed in order to overcome a tendency to squeakiness, and I was reminded, even as I heard myself speak, of a small boy's imitation of a tommy gun. Had Geisecker laughed, or had the sailor looked surprised or reluctant, I should have been in a very ludicrous situation. However, it seems that sailors are simple folk; this one showed alacrity, his teeth, and a spring knife that seemed all the more purposeful for being of very moderate dimensions. He glanced at Geisecker, or rather at the belly in question, as if making certain precise and workmanlike calculations, and then he went and gathered up the long net and carried it below. Geisecker watched all this with growing seriousness.

"Look," said he, "maybe I got things wrong somehow, but . . ."

"Listen, Fatso," said I, "if you get anything else wrong you're going to be put on a little Jap crabfisher boat, see? And the name of that boat's going to be screwed up when we write it down in the log. 'Cause it'll be a Japanese name that means *the boat that never returned.* Or never existed. Work that one out next time you feel like kidding."

I went down and found Glenway lying on his bed, not reading. I said, "I've fixed him. I can't believe it, but I have."

"How?" said Glenway.

When I had told him, he said, "He won't stay fixed, not by that sort of thing."

I said, "You think so because I've related it with a twinkle. When I spoke to Geisecker my voice was cold and dead, like steel, and I let my eyelids droop a little. Like this."

"He certainly won't stay fixed," said Glenway.

"In that case his belly will be cut open," said I. Because to Hill Wiggam, who is sitting right out there in the passage, this is his moment of fulfillment. Or it will be if Geisecker tries to get past him. It's a case of a man suddenly finding his vocation."

"I don't want Wiggam getting into trouble," said Glenway.

"Nor," said I, "does Geisecker." With that I went up and did my afternoon spell in the crow's nest, and later I had a drink with Geisecker, to whom I said as little as possible, not knowing what to say nor how to say it. I then dined with Glenway, in his cabin, and then had a smoke with Geisecker on the port deck, and at about ten o'clock, I went to spend the last hour of the evening with Glenway, who was still extremely tense.

"What's the night like?" he asked.

I said, "It's the most wonderful night of the whole cruise. The moon's just on full, and someone's let it down on an invisible wire, and you can see the curve of the stars going up behind it. The wind's light, but there's a hell of a big swell rolling in from somewhere. She's still got everything on but her balloon jib, and she's riding it like a steeplechaser. Why don't you go up and take the wheel for a bit?"

"Where's Geisecker?" asked Glenway.

"Amidships, on the port side, fenced in invisibly by threats," I said with some pride.

"I'll stay down here," said Glenway.

"Glenway," said I, "you're making altogether too much of this. The fact is, you've led a sheltered life; people like Geisecker have aways treated you with far too much respect. It sets you apart, and I find it rather offensive. Remember what Fitzgerald said about the rich. He said you are different. Think of that! It's almost worse than being the same."

"You forget what Hemingway said," replied Glenway, who perhaps found little attraction in either alternative.

"The Hemingway rebuttal," said I, "proves only what it was intended to prove. That is, that Hemingway is a fine, upstanding, independent citizen, and probably with a magnificent growth of hair on his chest. All the same, Fitzgerald had a point. Just because your iniquitous old grandfather happened to build a few railways—

"First of all," interrupted Glenway, "it was not my grandfather but my great grandfather. What's more—"

And at that moment, just as I was exulting in having induced him to unclench his hands, and look out of his eyes, and stick his neck out, the buzzer sounded again. I had forgotten to have it disconnected.

What was quite pathetic was that Glenway couldn't control an instinctive movement towards leaping off the bed. He arched up like a tetanus victim, and then collapsed as flat as an empty sack. The buzzer went on. I had a panicky feeling that he might arch up again at any moment. I lost my head and picked up a stool that stood in front of the dressing table and pounded that rattle-snake box into silence.

The silence, once achieved, seemed deep and complete. This was an illusion; we soon noticed that there were all sorts of noises here and there in the large emptiness left by the death of the outrageous buzzer. We could hear the patter of running feet on deck, and voices, and especially Geisecker's voice, spouting large jets of urgent sound.

I opened the door and the words came rushing in. "Glen! Glen! Come up, for God's sake! Can't you hear me? Come quick!"

"My God!" I said. "Maybe they *are* cutting his belly open."

With that, I ran up. Geisecker was at the head of the companion-way. He turned his head briefly to send another shout down the stairs; then he turned it back again to stare out over the sea. I barged into him. He blindly clutched at my arm and dragged me to the side of the boat, and pointed.

I saw something already disappearing into the great smooth side of one of the enormous waves. It was black, wet, shining, and very large. These words can be applied to a whale or a whale-shark, and maybe to two or three other things. I can summon up with absolute precision the way Geisecker's face was turning as I came up the companion-way; I can remember exactly how his shout went on a little after he had turned his head back to look over the sea again. But I haven't the same perfect mental photograph of what I saw disappearing into the wave. To the very best of my recollection I saw the hinder half of an enormous back and, following on a curve, already half lost in the black and moon-glitter, a monstrous tail.

The men who had run up were standing three or four paces away. I looked at them, and they nodded. As they did so I heard Glenway's voice speaking to the men. "You saw it?" He had come up after all, and had seen my look and their response as he came towards us. One of them said, "Yes, but he

shout," pointing to Geisecker. "He shout, shout, shout, and it go under."

Glenway stepped towards Geisecker, thus turning his back on the men. They couldn't see his face, but I could see it, and so could Geisecker. I don't think Glenway even raised his hand. Geisecker stepped backwards, which brought him, at what I would have thought a very slight and harmless angle, against the low gunwale. His big, fat, heavy torso went on and over; his feet went up, and he was gone. He was overboard.

I don't remember putting my hand on the life-belt, but I can remember flinging it, skimming it almost parallel with the side of the boat, and feeling sure it hit the water within a very few feet of Geisecker. Then the boat, whose six knots or so had been like nothing at all a moment earlier, seemed to be racing ahead faster than any boat had ever gone before.

Glenway shouted; the helmsman put the helm over and spilled the wind out of her sails. There was always a boat ready to be lowered at record speed. Two men were at the oars, Glenway took the tiller, and I stood in the bows looking out for Geisecker who could be no more than two or three hundred yards away.

The night was clear beyond all description. The enormous, smooth swells gleamed and flashed under the moon. The yacht, when we had drawn away from it, stood up like a snowy alp on the water, and when, at the top of each swell, the men lifted their oars for a moment, it was a moment of unbelievable silence, as if some tremendous creature was holding its breath.

Then I saw Geisecker. We were lifted high on one of the great glassy hills of sea, and he was beginning to slide down the slope of another. He had the lifebelt. I couldn't see his real features at that distance, but the white moonlight gave him such great hollow black eyes, and made such a crater of his open mouth, that I got the picture of a clown in comic distress. Then he went down, and we went down, and two or three ridges twenty feet high humped themselves between us.

I said, "He's ahead of us; a couple of hundred feet. You'll see him from the top of the next one."

But we didn't. I began to wonder if a man and a life belt rise and fall faster or slower on a rolling sea than does a fourteen foot boat. Before I could work out the answer we had gone up and down again and had arrived at a spot which certainly was extremely close to where I had seen him.

"You misjudged the distance," said Glenway after perhaps half a puzzled minute.

"I must have. Anyway, he's got the lifebuoy. He'll be all right. Let's row around in a circle."

One of the men put out a bailing can as a marker. The giant swells were so smooth that, ballasted with a couple of inches of water, the can floated up and down without shipping another drop. We went round it on a hundred foot radius and then at a hundred and fifty feet. Geisecker was not to be seen. And we could see, at one time or another, every square foot of water where he could possibly be.

"He's sunk!" said Glenway. "A cramp . . . a shark . . ."

"No shark would have taken the life-belt down. It'd be floating right here. We'd see it."

The words were scarcely out of my mouth when we saw it. It breached up, right out of the water —it must have come up from God knows how many fathoms—and it fell back with a splash just a boat's length ahead of us. Next moment it was beside our bow and I reached out and lifted it aboard. I turned, holding it in my hands, and showed it to Glenway. It was easier than speaking, and not so silly. We both knew perfectly well that no known creature, except possibly a sperm whale, could have taken Geisecker and the lifebelt down to that sort of depth. And we knew that what I had seen, and what the men had seen, was not a sperm whale.

We rowed around in circles for a little longer, and then we pulled back to the yacht. When we were aboard again, I said to Glenway, "You didn't as much as touch him. You didn't even mean to touch him. You didn't even raise your hand."

"And some of the men were watching," said Glenway with the utmost calm. "They can testify to that."

If not the railway tycoon, his great grandfather, it might certainly have been his grandfather, the banker, speaking. He saw my surprise, and smiled. "From the most scrupulous legal point of view," said he, "it was a pure accident. And we'll make a report accordingly. Of course, I killed the man."

"Now wait a minute," said I.

"Excuse me," said he. We were near the wheel. He took it from the man who was steering, and said something to him, and the man ran forward calling to the rest of the crew who were still on deck. Next minute the helm went up, the booms swung over, the sails bellied out on the other side, and the great boat was jibed and sweeping round on to a new course.

"Where are we heading now?" said I to Glenway.

"Due east," said he. "To San Francisco."

"To make the report? Can't you . . . ?"

"To put the boat up for sale."

I said, "Glenway, you're upset. You've got to see this business in proportion."

He said, "He was alive and enjoying himself, and now he's dead. I didn't like him; I detested him, but that's got nothing to do with it."

I said, "Don't be completely psychologically illiterate. It's got everything in the world to do with it. You hated his guts, a little too intensely, perhaps, but very understandably. You wished he was dead. In fact, you more or less said so. Now you've got guilt feelings; you're going to take the blame for it. Glenway, you're an obsessive type; you're a Puritan, a New Englander, any early Christian. Be reasonable. Be moderate."

"Suppose you were driving a car," said Glenway, "and you knocked a man down and killed him?"

"I'd be very sorry, but I think I'd go on driving."

"If you were a speed demon, and it was because of that? Or a drunk? Or if you were mentally unfit to handle a car?"

"Well . . ." I said.

But Glenway wasn't listening. He beckoned the man who had been steering, and turned the wheel over to him. He gave him the course and told him who was to relieve him in each watch. Then he turned away and walked forward. He walked like a passenger. He walked like a man walking on a street. He was walking away from his mania, and in the very hour of its justification.

I followed him, eager to bring him back to himself, but he walked away from me too.

I said to him considerably later, "I've found out something very interesting, talking to the men. Shall I tell you?"

"Please do," said he.

I said, "I thought they rather liked Geisecker because he made them laugh. But they didn't. Not a bit. Are you listening?"

"Of course," said he as politely as a banker who has already decided not to make a loan.

I said, "They hated him almost as much as you did, and for the same reason for making fun of it. They believed in it, all the time. They've all got different names for it, according to where they come from. Almost every man's got an uncle who's seen it, or a wife's grandfather, or someone. And it's quite clear it's the same sort of beast."

Glenway said, "I've decided I'm going to buy a farm or a ranch as far from the ocean as I can get. I'll breed cattle or hybridize corn or something."

I said, "You've been over seven years on this boat with these men, or most of them. Did you know they believed in it?"

"No," said he. "Or I might go in for soil biology. There's still a tremendous amount to be discovered in that field."

This made me feel very sick. I felt Glenway was indeed differ-

ent; different from me, different from himself. The beautiful *Zenobia* had to be sold, the crew disbanded and the large marine saurian left to dwindle into a figure on an old map, distant and disregarded in its watery solitude. As for myself, all my friendship with Glenway had been aboard the boat; I was part of it; I was one of these things. I had been nothing but the accomplice of his obsession, and now he was, in a way I didn't like, cured. I felt that I too was up for sale, and we talked amiably and politely and quite meaninglessly all the way back to San Francisco, and there we said goodbye to each other and promised to write.

We didn't write in over three years. One can't write to the ghost of a banker, nor expect a letter from one. But this summer, when I was in New York, I got home one night and found a letter awaiting me. The postmark was Gregory, South Dakota, which is about as far from either ocean as you can get.

He was there; he wondered if I knew those parts; he wondered if I was likely to be free; there were some interesting things to talk about. The lines were extremely few but there was all the more space to read between them. I took up the telephone.

It was nearly midnight, but of course it was two hours earlier in South Dakota. All the same Glenway was a very long time coming to the phone. "I hope I didn't get you out of bed," I told him.

"Heavens, no! said he. "I was on the roof. We get wonderful nights here; as clear as Arizona."

I remembered that clear night in the Pacific, and the flash and glitter of the enormous glassy waves, and the silence, and the boat rising and falling so high and so low, and the yacht like a hill of snow in the distance, and the little bailing can visible at over a hundred feet. I said, "I'd like to come out right away."

"I rather hoped you would," said Glenway, and began to tell me about planes and trains.

I asked him if there was anything he wanted from New York.

"There most certainly is," said he. "There's a man called Emil Schroeder; you'll find his address in the book; he's out in Brooklyn; he's the best lens grinder that ever got out of Germany, and he's got a package for me that I don't want sent through the mail because it's fragile."

"What is it?" I asked. "A microscope? Did you go in for soil biology after all?"

"Well, I did for a time," said Glenway. "But this is something different. It's lenses for a binocular telescope a fellow's designed for me. You see, a single eye piece is no good for following anything that moves at all fast. But this binocular thing will be perfect. I can use it on the roof, or I can set it in

a mounting I've had built into the plane."

"Glenway, do you mind telling me what the hell you're talking about?"

"Haven't you read the government report on unidentified flying objects? . . . Hello! Are you there?"

"Yes, I'm here, Glenway. And you're there. You're there, sure enough!"

"Listen, if you haven't read that report, do please get hold of it first thing tomorrow, and read it on the way out here. I don't want to hear you talking like that unfortunate Geisecker. Will you read it?"

"All right, Glenway, I will. I most certainly will."

Through Time And Space With Ferdinand Feghoot: XXIV

IT WAS FERDINAND FEGHOOT'S INFLEXIBLE logic which, in 3938, succeeded in tempering the barbarous colonial oppressions of Chunder-ud-Din, All-Powerful Lord[108] of Hindustan, Earth, and the Outlying Worlds, Son of the Prophet, and Official Reincarnation of Pandit Nehru, Maria Callas, and Bishop G. Bromley Oxnam.

On the conquered planet Saddhu XVI, which was singularly earthlike, the Autocrat saw the important role played by Great Auks, which were by no means extinct, in the culture. The natives buried their dead in large cairns with lids of baked clay, and in the hurricane season this gave rise to mournful organ-like sounds which were blamed on spirits lamenting the presence of insects infesting their graves. Therefore families who could afford it hung a Great Auk in a cage under the lid of their cairn, feeding it regularly. The birds were fair wind-stoppers, but the tribal elders believed that they went down at night and picked bugs off the corpses.

As Grand Vizier, Feghoot explained all this very carefully. But the ruler was outraged. "Why don't they expose their dead for the vultures to eat, like civilized people?" he cried out. "Wipe them out! There's no precedent for this sort of custom."

"Precedent?" exclaimed Ferdinant Feghoot. "O Thrice-Born, have you not heard about 'Great Auks from lid allay cairn's groan?' "

—GRENDELL BRIARTON

(with thanks to Leonard Rubin)

Robert Sheckley's last F&SF story—the much praised "The Prize of Peril—told of the beast that might well come out in men in an overpopulated, jaded world. Here Mr. Sheckley turns his acute eye on an insanely underpopulated world, and reports on an encounter between a dedicated pacifist and a clutch of particularly unjaded girls.

THE GIRLS AND NUGENT MILLER

by Robert Sheckley

NUGENT MILLER BENT DOWN and examined the footprints, gently brushing aside leaves and twigs with his pocket knife. They had been made recently, by a small foot. Perhaps a woman's foot?

Staring at the footprints, Miller could glimpse the woman rising from them, could see too vividly the high-arched foot, the narrow ankle and the slender golden legs. Turning the imaginary woman on her imaginary pedestal, Miller admired the long graceful curve of her back, and he could see—

"That's enough," he told himself. He had no proof other than the footprint. Hope could be dangerous, desire could be catastrophic.

He was a tall, thin, sad-faced man, very sunburned, wearing sneakers, khaki slacks and a blue polo shirt. He had a knapsack on his back and a geiger counter in his hand. He wore horn-rimmed glasses. The left sidepiece had been broken and repaired with a twig and string, and he had reinforced the nosepiece with wire. The glasses seemed secure now, but he still didn't trust them. He was quite myopic. If a lens broke, he could never replace it. Sometimes he had a nightmare in which his glasses dropped from his nose and he reached for them and just missed and the glasses fell down a mountainside, turning over and over in the air.

He pressed the glasses more firmly against his nose, walked forward a few yards and examined the ground again. He could detect

two or three sets of footprints, maybe more. From the look of the ground they had been made recently.

Miller found that he was beginning to tremble. He squatted down beside the footprints and reminded himself that he must not hope. The people who made those prints were probably dead.

Still, he had to make sure. He straightened up and began following the footprints. They led through a stubbled field to the edge of a forest. He stopped for a moment and listened.

It was a silent, beautiful September morning. The sun beat down on the barren fields, and light glinted from the stripped white branches of the forest. The only sounds he heard were the tired sigh of the wind and the background clicking of his geiger counter.

"Normal reading," Miller said to himself. "Whoever came this way must have had a geiger."

But they might not have used it properly. Perhaps they were contaminated, perhaps they were dying of radiation sickness. He couldn't allow himself to hope. He had stayed sane this long by not hoping, not wishing, not desiring.

"If they're dead," he told himself, "I'll give them decent burial." That thought exorcised the evil demons of hope and desire.

Within the forest, he lost the faint trail in the underbrush. He tried to continue in the same direction, but his geiger counter began to chatter furiously. He moved out at right angles, holding the geiger in front of him. When he had bypassed the hot spot he turned again, at an exact right angle, and walked parallel to the direction of the trail. Carefully he counted his paces. It wouldn't do for him to get caught in a pocket with radiation all around and no clear path out. That had happened to him three months ago, and the geiger's batteries had been nearly exhausted before he could find a way out. He had spare batteries in his knapsack now, but the danger was still there.

After about twenty yards he turned again to cross the trail, walking slowly, watching the ground.

He was lucky. He found the footprints again, and near them a fragment of cloth caught on a bramble bush. He plucked the cloth and put it in his pocket. The footprints looked very fresh. Did he dare allow himself a little hope?

No, not yet. He still remembered what had happened less than six months ago. He had climbed a small sandstone cliff to forage a warehouse on its top. At sunset he had come back down the cliff, and at the base he had found the body of a man. The man had been dead only a few hours. A submachine gun and a rifle were strapped to his shoulders, and his pockets were

stuffed with grenades. They had been no protection against his subtlest enemy. The man had killed himself; the warm revolver was still in his hand.

Apparently he had been following Miller's footprints. When he had come to the base of the sandstone cliff, the footprints ended. Perhaps the man's stamina had been undermined by the harsh radiation burns across his chest and arms; perhaps the instant of shattered hope when the footprints ended in solid stone had been too much for him. Whatever the reason, he had blown out his brains at the foot of the cliff. Hope had killed him.

Miller had removed the man's armament and buried him. He thought about the weapons for the better part of a day. He was tempted to keep them. They might be very necessary in this shattered new world.

But finally he decided against keeping them. He was not going to violate the sternly held pledge of a lifetime; not after all he had seen. Besides, weapons at a time like this were too dangerous to the user. So he threw them into the nearest river.

That had been less than six months ago. Now it was Miller who followed footprints, through thin forest loam to a narrow stream of running water. When he had crossed it he was able to count, in the stiff mud, five separate sets of footprints. They were so recent that the water was still seeping into them. The people must have passed here within the half-hour.

He felt the demons of hope and desire stir within him. Surely it wouldn't be too unwise now to consider the possibility of meeting people? Yes, too unwise. The unleashed demons, once frustrated, turned against you, as they had turned against the man at the base of the sandstone cliff. Hope and desire were his most dangerous enemies. He didn't dare release the genies from the corked bottle deep in his mind.

He walked quickly along the trail, certain, from the increasing freshness of the prints, that he was moving faster than the presumed group of people. His geiger clucked contentedly to itself, satisfied with the low radiation level. The people ahead of him—if they were still alive—must be picking their way through with a geiger.

Survival had been so simple, really; but so few had managed it.

Miller had known the end was in sight when the Chinese communists launched their large-scale amphibious assault against Formosa. At the beginning it had looked like a local war, as local as the angry little war being fought in Kuwait, and the U.N. police action on the Turkish-Bulgarian border.

But it was one war too many. Treaties, like chains, dragged

country after country into the conflict. No nuclear weapons had been employed as yet, but their use was imminent.

Nugent Miller, associate professor of Ancient History at Laurelville College in Tennessee, read the handwriting on the wall and began to set up caches of food in the Laurelville Caverns. He was thirty-eight at the time, and an ardent, life-long pacifist. When the DEW line radar sent back word of unidentified missiles from the north, Miller was already packed and ready. He went at once to the Laurelville Caverns, one of whose mouths was less than a mile from the college. He was surprised when only fifty or so students and faculty joined him. Surely the warning was clear enough.

The bombs fell, and drove the group deeper into the labyrinth of caves and tunnels. After a week, the bombs stopped. The survivors started to the surface.

Miller checked the radiation at the cave mouth and found it lethal. They couldn't leave. Food had already run out, and radioactive debris was filtering down, forcing them deeper into the caverns.

By the fourth week, thirty-eight people had starved to death. The radiation at the entrances was still too high to permit leaving. Miller decided to go into the lower levels and try to locate a still-untouched food cache. Three others accompanied him. The rest decided to risk the radiation and break out.

Miller and his friends climbed deep into the darkness of the caverns. They were very weak, and not one of them was a trained speleologist. Two were killed in a rock fall. Miller and one man clung stubbornly to life. They couldn't locate the food cache; but they did find a stream of black water, and saw the luminous dots of fish in the water, blind fish who lived all their lives in the caves. They fished, and caught nothing. It was several days before Miller was able to block up a branch of the stream, trap several fish and land them. By then, his friend was dead.

Miller lived by the stream and worked out ways of catching fish. He kept time as best he could, and climbed painfully to the surface once a week to check the radiation. It took twelve weeks for it to drop enough to allow him to leave.

He never saw any of the others from the cave, although he did find a few of their bodies.

Outside, he tried to locate people, anywhere. But hard radiation had caught most of the survivors of the hydrogen bombings. Very few had been equipped with food stores or geiger counters. All, or nearly all, had gone out in search of food before the radiation had dropped to a tolerable level. Doubtless there were some survivors; but where, where?

For several months he had

looked. Then he stopped looking. He assumed there were some people left in parts of Africa and Asia, in South America. He would never see them. Perhaps he would find a few on the North American continent some day. Perhaps not. In the meantime, he would go on living.

He lived, trekking south in the fall and returning north in the winter, a quiet man who had never wanted war, who hated killing with a passion that many had simulated but few had felt. He was a man who clung to many of his former habits as though the bombs had never fallen. He read books when he could find them, and apologetically collected paintings and sculptures, stealing them from the ghostly caretakers of the empty art galleries.

He was a man who, long before the Second World War, had promised himself never to kill a fellow human; and who now, after the Third World War, saw no reason to change that resolve. He was an amiable, boyish college type who had survived the death of the fittest and who, after the agonized destruction of a world, was still filled with high resolves and impeccable ideals. He was a man whom circumstance had forced to repress desire and abandon hope.

The footprints led through sparse underbrush, around a moss-covered granite boulder. He heard sounds.

"A gust of wind," he told himself.

He came around the boulder and stopped. In front of him, only a few yards away, were five people. To his starved eyes they looked like a crowd, an army, a multitude. They were camped around a small fire. It took him several seconds to assimilate this much information.

"Well I'll be damned," one of them said.

He adjusted. He took in the scene again. Five people, all of them women. Five women, dressed in ragged jeans and denim jackets, with rucksacks on the ground beside them, with crude spears propped up against the rucksacks.

"Who are you?" one of the women asked. She was the oldest, perhaps fifty years old. She was a short, stocky, strongly built woman with a square face and iron-gray hair, with strongly muscled arms and a brown, sinewy neck, with pince-nez—one lens cracked—perched incongruously on her large nose.

"Can't you talk?" the woman asked sharply.

"Yes, I can talk," Miller said. "Sorry. I was just surprised. You're the first women I've seen since the bombing."

"The first women?" she asked sharply. "Have you seen men?"

"Only dead ones," Miller said. He turned from her and looked at the other four. They were young, somewhere in their twenties, and

Miller thought them inexpressibly beautiful. Undoubtedly they were different and distinct from each other; but to Miller, coming upon them as he would encounter an unknown race, they were alike in their alienness. Four comely animals, golden-skinned and long-limbed, with the great calm eyes of panthers.

"So you're the only man around," the older woman said. "Well, that won't constitute any problem."

The girls didn't speak. They were staring at him. Miller began to feel uncomfortable and self-conscious. He was considering the responsibilities of the situation, and the thoughts excited yet disturbed him.

"We might as well get introductions over with," the older woman said in her firm, matter-of-fact voice. "My name is Miss Denis."

Miller waited, but Miss Denis didn't introduce the girls. He said, "My name is Nugent Miller."

"Well, Mr. Miller, you're the first person we've encountered. Our story is really very simple. When I heard the alarms, I took the girls to the sub-basement of our school. The Charleton-Vaness School for Young Ladies, that is. I am—I was—an instructor in Etiquette."

A colleague, Miller thought wryly.

"Naturally," Miss Denis went on, "I had equipped the shelter with supplies, as any prudent person should have done. But as few did. I had several geiger counters, in whose use I had familiarized myself. Some foolish people insisted upon leaving the shelter immediately after the bombs had stopped falling. I succeeded in impressing on these girls the dangers of radiation. It seeped down. We were forced to abandon the sub-basement and take refuge in the sewer system further down."

"We ate rats," one of the girls said.

"That's right, Suzie," Miss Denis said. "We ate rats and were very happy to get them. When the radiation subsided to a safe level, we came out. We have been doing nicely ever since."

The girls nodded in agreement. They were still watching Miller with their panther eyes. And Miller was watching them. He had fallen in love with all of them simultaneously and quite genuinely, particularly with Suzie because she had a name. But he hadn't fallen in love with the squat, strong-armed, matter-of-fact Miss Denis.

"My own experiences were quite similar," Miller said. "I went into the Laurelville Caverns. I didn't find any rats to eat, but I did consume some very odd-looking fish. I suppose the next thing is, what do we do?"

"Is it?" Miss Denis asked.

"I should think so. We survivors should stick together for mutual

support and assistance. Shall we go to your camp or mine? I don't know how much foraging you've done. I've done quite a bit. Assembled a library and a few paintings, and a good stock of food."

"No," Miss Denis said.

"Well, if you insist upon your camp—"

"I do indeed. Our camp. And alone. That means without you, Mr. Miller."

Miller could hardly believe it. He looked at the girls. They looked back at him warily, their faces unreadable.

"Now listen," Miller said, "we need mutual support and assistance—"

"By which you mean the lasciviousness of the male," Miss Denis said.

"I didn't mean anything of the sort," Miller said. "If you insist upon talking about that now, I suppose we can just let nature take its course."

"Nature *has* taken its course," Miss Denis said. "Its only true course. We are five women. We have done very well together over the last months. Haven't we, girls?"

The girls nodded, but their eyes were still fixed upon Miller.

"We have no need," Miss Denis said, "of you or any other man. No need and no desire."

"I'm afraid I don't understand," Miller said, although he was beginning to.

"Men are responsible for all this," Miss Denis said. She waved her thick hand in an all-encompassing gesture. "Men ran the governments, men were the soldiers and the nuclear scientists, men started the war that has wiped out most of the human race. Even before the bombings I always warned my girls to beware of men. A lot of drivel was talked about equality of the sexes; in practice, woman was still man's chattel and his plaything. But when times were normal I couldn't explain my theories fully. The school would not have allowed it."

"I can understand that," Miller said.

"Now times are no longer normal. You men have messed things up once and for all, and you're not going to get another chance. Not if I have anything I can do about it."

"Maybe the girls don't feel that way," Miller said.

"I am educating the girls," Miss Denis said. "It's a slow process, but we have plenty of time. And I believe my lessons have begun to take hold. We've had a good time together, haven't we, girls?"

"Yes, Miss Denis," the girls chorused.

"And we don't need this man around the premises, do we?"

"No, Miss Denis."

"You see?"

"Now just a minute," Miller said. "I think you're laboring un-

der a misapprehension. *Some* men have been responsible for wars. Not *all* men. I for example, was an ardent pacifist at a time when it was distinctly uncomfortable to be one. In the Second World War, I served in an ambulance unit. I have never taken a human life, and I never intend to."

"So you're a coward as well as a man," Miss Denis said.

"I do not consider myself a coward," Miller said. "I have been a conscientious objector out of conviction, not cowardice. My ambulance unit operated on the front lines, like soldiers, except that we were not armed. I have been under fire. I have been wounded, though not badly."

"How utterly heroic," Miss Denis said, and the girls laughed.

"I'm not trying to parade my accomplishments before you," Miller said. "I'm simply trying to make you see what sort of a man I am. Men differ, you know."

"They're all the same," Miss Denis said. "All of them. Dirty, hairy, smelly promiscuous beasts who start wars and kill women and children. Don't try to tell me about men."

I must," Miller said. "You don't know much about them. Tell me, what did *you* do to stop the wars you hate so much?"

"What can any woman do?" Miss Denis asked. "The captives must follow the conquerers."

"Nonsense," Miller said. "There was plenty women could have done if they'd really wanted to stop wars. Have you ever read *Lysistrata?* Aristophanes tells how the women of Greece refused to cohabit with their husbands until they stopped fighting. It makes the point—"

"I have read the play, "Miss Denis said. "It was hardly a practical solution."

"Why not? Wasn't it because too many of you women loved war and worshipped soldiers? You could have stopped it if you'd wanted to. But you didn't! Nietzsche said—"

"Don't stand there quoting your damned *men* authors at me," Miss Dane said. "Your logic is specious. The fact is, you men had the power and you abused it. You treated women as playthings, and you used the Earth as one big battleground until you warred yourselves right out of existence. You're finished now, washed up, over. You're an extinct species. You stand there with your funny hairy face and you look as strange as a dinosaur or an auk. Go off and die somewhere, Miller. We women are going to have our chance now."

"You may find breeding difficult," Miller said.

"But not impossible. I kept in very close touch with the latest work being done in parthenogenetic research. Reproduction without the male is distinctly possible."

"Perhaps it is," Miller said. "But you aren't a trained scientist. Even if you were, you don't have the equipment."

"But I do know the places where the research was carried out," Miss Denis said. "We may find one of the women scientists still alive. Our chance is even better of finding lab equipment intact. With that, plus my own knowledge of the subject, I think I can lick the problem."

"You'll never do it," Miller said.

"I think I will. But even if I can't, I'd rather see the race die out than let *men* take over again."

She was growing red-faced and angry. Miller said quietly, "I can well understand that you have grievances against men. *Some* men. But surely we can talk this through and reach some mutually satisfactory—"

"No! We've done all the talking we're going to do! Get out of here!"

"I'm not going," Miller said.

Miss Denis moved quickly to the pile of weapons and picked up a spear.

"Girls," she said, "get ready."

The girls were still fascinated with Miller. They hesitated a moment. Then, obedient to Miss Denis' strong personality, they took handfuls of rocks from their knapsacks. They were excited now. They watched Miss Denis expectantly.

"Are you leaving?" she asked.

"No!"

"Stone him!"

A hail of rocks flew through the air. Miller turned away to shield his geiger counter, and felt stones pelt him in the back and legs. He could hardly believe it was happening. These girls whom he loved—and especially Suzie—wouldn't be stoning him. They would stop in a moment, they would be ashamed.

But the rocks flew, and one caught him on the top of the head, half-stunning him. He shook his head, turned and ran forward, still holding the geiger counter. Miss Denis tried clumsily to impale him on her spear. He avoided the thrust and grabbed the spear with his left hand. They wrestled for it.

One-handed, he almost pulled it away; but Miss Denis, strong and squat as a bull, was too much for him. She wrenched the spear free and hit him over the head with the knobbed end. And the girls cheered!

Miller was on his knees now, and the rocks were still raining around him. A spear-point prodded him in the side. He rolled away from it and regained his footing.

"Kill him!" Miss Denis screamed. "Kill the dirty man!"

The girls, their faces flushed with excitement, advanced on him. Miller felt a spear graze his side. He turned and ran.

He didn't know how long he ran through the green twilight of

the forest. At last he couldn't run any more. He drew his pocket knife and turned; but no one was following him.

Miller lay down on the cool ground and tried to think. That woman, that Miss Denis, must be crazy. An old man-hater, a hard-bitten Lesbian gone stark raving mad. And the girls? He was sure they hadn't wanted to hurt him. Perhaps they loved him But they were under the influence of the old bitch.

He checked and found that he hadn't lost his geiger counter or his glasses in the flight. He was grateful. Without them, it would be difficult to find his own camp.

He had always known that people were a little crazy. He should have realized that the survivors of an atomic holocaust would be even crazier than usual. That insane Miss Denis. Imagine *man* being an extinct species!

With a shock, Miller found that he could imagine it. After all, how many men had survived? How many women? What number of those survivors had geigers, what number would be able to overcome the hazards that lay ahead?

Still, that didn't affect him. The human race wasn't his responsibility. He had been a fool to release the demons of hope and desire. Now he would have to conquer them all over again. But he could do it. He would live the rest of his life among his books and paintings. Perhaps he would be the last truly civilized man.

Civilized . . . Milller shuddered and remembered the face of Suzie and the others, their panther eyes watching. Too bad he hadn't been able to effect some sort of compromise with Miss Denis. But under the circumstances there was nothing he could do—

Except abandon every principle he had ever lived by.

Could he do it? He looked at the knife in his hand and shuddered under the weight of the demons on his shoulders. His hand tightened around the hilt.

A moment later, the world's last civilized man was dead. With him perished the world's last pacifist and conscientious objector, the final art collector and ultimate bibliophile.

In the place of these admirable creatures was *Miller,* the small knife gripped in his hand, looking around the forest for something.

He found it. A lightning-blasted bough three feet long, and heavy.

Quickly he trimmed off the excess sprouts. Soon, Miss Denis was going to have the horrid epitome of all hairy, smelly, dirty, club-wielding maledom bursting in upon her. He hoped she would have time to realize that she had called the beast to life herself. It would be quite a surprise for her.

And shortly after that, the girls were in for a surprise. Especially Suzie.

The always reliable Miss deFord with a bedtime sort of story—the whole offering a fillip of horror at the end which may surprise you.

THE MONSTER

by Miriam Allen deFord

THEY FINALLY GOT BOBBIE TO bed, still sobbing, and they they sat with him, talking to him softly until he fell into an exhausted slumber. They tiptoed out, leaving the bed-lamp burning, and practically fell into chairs.

Dick wiped his forehead. "We need a drink," he said.

Mary nodded, her eyes closed, but both of them were too tired to make the effort.

"Damned comics," Dick growled.

"Do you think that's it?"

"What else could it be? That or those horror movies and TV shows you let him see."

"Let him? All the kids watch them, and if you try to put your foot down, you're a cruel tyrant."

"I know, I know. And he's got to be popular, and adjust to his age-group, or we'll be raising a little neurotic. So now this!"

Mary shivered.

"It's like an epidemic," she said. "If it were just Bobbie, we could cope. But when every kid he knows—and when we can't even get the doctor, he's so busy with the ones whose parents got him first—"

Dick roused himself enough to get to the kitchen. He came back holding two bedewed glasses.

"Well, cheers!" he muttered. "Here's hoping it will be over as quickly as it began."

Mary looked at him over her raised glass, her eyes widened.

"Dick, I just had a horrid thought. Suppose it's really true?"

"Don't be a fool, darling. Anybody know that little girl's name? Any little girl reported missing?"

"No, but—"

"We've had the families of every kid Bobbie knows on the phone tonight, either them calling us or us calling them. Not a single one of them could tell us more than we got out of Bobbie."

"Lucille Devon said she'd heard it was a little girl on the South Side—"

"Sure; and when I called the police they switched me to somebody who's spent hours answering calls and saying automatically that no such report has been made. I'm sorry for them; they've had the devil's own time ever since school ended this afternoon, chasing the kids home from the cemetery."

It had started then. Mary wasn't taking Bobbie to and from school any more; at eight he was old enough to go the four blocks by himself. When he didn't come home by the usual time, she didn't worry—he'd probably gone home with one of his friends. Bobbie was a responsible child, and could be relied on to turn up by dinnertime, or else phone for permission to stay somewhere else.

Only he didn't; and when it was beginning to grow dark, Mary started calling the numbers of his special pals. After the fourth parent had reported no Bobbie—and no Martin or Kathy or Bill or Henry either—she began to worry in earnest.

Then Dick arrived, and even before he kissed her he asked, "Is Bobbie here?"

"No, he isn't, Dick, and I don't know where he can have got to. I've been phoning and—" An ice sliver stabbed her heart. "Dick, is something wrong? Do you know something?"

"Now, darling, calm down. It's just that crazy thing that was going on when I drove past the cemetery. I didn't think Bobbie could possibly be one of them, but—"

The old cemetery, which was due to be taken over and ploughed under for a new housing development as soon as the town could buy a suitable place on the outskirts to which to move the bodies, had once been on the outskirts itself, but now it was in the center of town; he passed it twice every week-day without even a glance or a thought. That was why he had given it a double-take when, this evening, he realized something peculiar was going on in it.

He slowed down and stopped at the curb to look. The cemetery, he could see through the main gate, was full of a running, screaming mob—and they were all children. As Dick stopped, the old watchman emerged from his little lodge, shaking his fist and yelling.

"What's the matter?" Dick called to him.

The old man shook his head.

"The kids!" he called back. "I don't know what's got into them! They came right over the wall. They've been pouring in here for two hours, and I can't get them out. I've phoned the cops—it's more than I can handle."

"Anything I can do to help?" Dick asked reluctantly; he was tired from the day's work and hardly felt up to dealing with a hundred or more screaming chil-

dren. He scarcely waited for the watchman's gesture of negation before he started the car again and drove home fast to see if his own son was safely there.

Only he wasn't.

"Should we phone the police?" Mary asked dubiously when he had told her what he had seen.

"The watchman did that. I'm going to drive back there and see if I can find Bobbie. What in the name of heaven do you think has happened?"

But as he opened the door again, they could hear the crying. Down the street ran every child in the block, heading like homing pigeons for their own houses, every one of them, boys as well as girls, sobbing and howling. Mary ran down the steps and caught Bobbie in her arms as he hurled himself at her. They brought him in and she dropped with him into the nearest chair. Dick ran for a glass of water, the only thing he could think of.

It took a long time to get him quieted enough to say anything, and then it didn't make sense.

"The monster!" he kept crying. "It's in the cemetery! It strangled a little girl and ate her!"

"Shsh!" Mary soothed him. "That's just a story, Bobbie. There aren't any monsters. Somebody told a story and you thought it was true. Nobody's going to hurt you while daddy and mommie are here."

"It will, it will!" Bobbie sobbed. "The cops chased us away, and we were going to find it and kill it. It ate a little girl! They chased us away and now it will get out and come to people's houses!"

Dick tried another tack.

"All right, Bobbie. It's all over now. The policemen will find the monster and kill it for you. You don't have to be frightened any more."

Mary frowned up at him. "Better not," she mouthed silently. To the hysterical child she murmured, "Daddy means that *if* there had been a monster there the policemen would have found it and killed it. But we know there isn't any such thing as a monster that eats little girls, don't we?"

"There is!" Bobbie tried to leap out of her arms; she had to hold him tight. "Shut the windows! Please shut the windows, daddy! It'll come in and get us!"

"I don't like this, Mary," Dick said. "I'm going to phone Tallman."

But Dr. Tallman's nurse told them the doctor had been gone for half an hour. "I'll put your name on the list when he calls in, Mr. Frazier," she said. "But I don't know when he'll get around to you. He said to tell everybody who phoned to give the children a warm bath and some hot milk and put them to bed, and he'll check on them when he can."

"Could I get somebody else?"

"Not any child specialist, Mr. Frazier—they're all up to their ears in this crazy thing. Of course if your little boy isn't all right by tomorrow, Dr. Tallman can recommend a psychiatrist, if you wish."

"Certainly not," Dick snapped. "My child is perfectly normal mentally." He hung up.

There was nothing to do but follow instructions. At last they had been able to leave Bobbie worn out enough to sleep. The door to his room was open, and they could hear him if he stirred. Dinner was dried to leather on the stove.

He slept through to morning, though neither of his parents got much rest. At six, Mary slipped on her robe and slippers and made one of the periodic trips to his room. He opened his eyes and smiled at her. Then suddenly the eyes filled with terror and he clutched her hand.

"We've got to get the monster!" he whispered. He jumped out of bed.

"Dick!" Mary called. He came running, still half asleep, barefoot, his hair ruffled, and gathered Bobbie up in his arms.

"Steady, old man! Did you have a bad dream?"

"It wasn't a dream, daddy!" Dick could feel the child trembling. "We've got to get the monster!"

His parents stared at each other. Dick could feel anger welling up in him; he suppressed it with an effort. You couldn't be angry with a child obviously frightened out of his wits.

All over town, similar scenes were taking place. Something had spread like a plague to terrify every school-age child, and these children had infected their younger brothers and sisters, until babies barely able to talk were screaming in fear of a "mon'ter." The dividing-line seemed to be at 13 or 14; children of that age jeered at their juniors—but mildly. "Aw, you're nuts!" they scoffed—but their voices weren't steady.

The few children who went to school that morning were accompanied by parents, who promised solemnly to return for them at closing time. Teachers could do nothing with them: their minds were on nothing but the monster who had strangled and eaten a little girl whom nobody had ever heard of. Ridicule, scolding, persuasion, had no effect. Principal after principal called the superintendent's office and asked what to do. They could not close the schools and send the children home; half of them would refuse to leave till their parents came for them, and the braver half would head straight back to the cemetery and another riot.

They would not get in again, however. The cemetery was guarded now, with embarrassed

policemen every few feet around its walls. Among yesterday's frantic youngsters had been the mayor's son, and the two daughters of the chief of police. Shamefacedly the policemen had searched every inch of the cemetery, even entering vaults. There was nothing there but the peaceful dead. And still no one had reported a little girl missing.

The Fraziers kept Bobbie home. They kept their doors and windows locked, as he demanded, and gradually, after Dick had had to leave for work, he grew calm enough to unburden himself to his mother of what details he knew.

He wasn't sure which of the kids had known about it first in his class. But a note had been passed from hand to hand under Miss Schultz's unseeing eye, reading: "Look Out for the Monster!" Everybody had thought it was a joke. But then at recess all the kids began talking—he didn't know who was first, but soon everybody was telling everybody else.

The night before, everybody said to everybody, a huge monster, shaped like a man but with long iron hooks instead of hands and long iron teeth protruding from an enormous mouth, had risen up from the ground in the middle of the cemetery, vaulted the eight-foot wall, and escaped into the streets. It had slunk through alleys and behind buildings until it found a little girl who must have run away from home and was hiding in the back of an abandoned warehouse by the river.

When the monster saw her, it hurried toward her, swaying on its clumsy big feet, and gurgling horribly. As the girl caught sight of it, she screamed, but there was nobody to help her. She stood paralyzed by fear, unable to run, and the monster had grabbed her, strangled her with one iron hand, and squatted there on the empty sidewalk to satisfy its hunger. It had drunk her blood, then devoured her, skin and flesh and even bones, which it cracked to suck the marrow. All that was left was her hair and teeth and her clothes. Then, sated, it had lumbered back to the cemetery, and there it was hiding now, ready for another raid on the town as soon as darkness fell.

A lot of the kids laughed and made fun of the little ones who were scared. But as the story spread, with each narrator adding some detail to make it more circumstantial, even the skeptics began to get panicky. The trouble was, there was an answer ready for every question. How did anybody know about all this if nobody had been there but the little girl and the monster? Some boy had seen it, from a window of a building across the street, and had been too frightened to tell anyone till morning; then he had told

other kids on the way to school. If he had done that, he must go to their school—so who was he? By this time nobody was sure who had told the story first. Why hadn't the cops found the little girl's hair and teeth and clothes, by this time? Maybe they had—or maybe the monster had hidden them or taken them away with him back to the cemetery. Well, then, how could the boy who was watching from the window know that the cemetery was where the monster had come from and gone back to? Because it came and went in that direction, and where else would a monster be able to conceal itself?

Then the bell rang and they had to go back to their rooms. In Bobbie's class, Miss Schultz gave up in despair after a quarter hour of buzzing and inattention. "What on earth is the matter with all of you?" she cried; but nobody told her, because this was something that concerned kids, not grown-ups. Bobbie himself had thought perhaps she ought to be told—she could tell the cops and they would go to the cemetery and get the monster and kill it. He wrote that in a note to Jimmie Hayes, but Jimmie wrote back: "No she'd laugh, she'd say we're making up stories. Lets *us* go. All of us, after school."

They were having a drawing lesson by then, and it was easy to pass notes. Jimmie handed his suggestion on, and everybody thought it was a swell idea. Other kids in other classes must have thought of it too; for the minute the closing bell had rung, there was a rush to get outside, where word passed from one to another, so that instead of heading for home the kids all dashed in a body toward the cemetery—all but a few sissies whose people came for them and who dared not ignore them.

The old watchman tried to bar the gate, but that didn't stop anybody. Some of the bigger kids swarmed up the wall, and helped the smaller ones over. They raced all over the place, trampling graves, knocking over bushes, finding not a trace of the intruder.

"But how did you think you could capture a—an ironclad monster, just you boys and girls, with nothing to attack it with?" his mother wanted to know.

"There was enough of us," Bobbie said curtly. "We could hold it, and send somebody to tell the watchman to get some cops. Anyway, pretty soon it wasn't just the kids from our school—the other schools found out and they came too, only it took them longer because they were farther away. One girl saw her cousin, from way over the other end of town."

"But you *didn't* find anything, did you?" She was going to add, didn't that show there was nothing there? when she saw Bobbie's lips quiver, and she bit the words back. Mass hysteria, mass panic—they weren't open to reason.

"It was hiding!" Bobbie's voice shook. "It knew we were there—it could hear us yelling and running. It hid.

"And then that old man called the cops anyway, when we hadn't told him to, and they came and they didn't even help us look—they just pushed us out of there, and left the monster scrounged down somewhere so he could come out again at night and get somebody else to eat! So I ran home as fast as I could, and—"

Then he started to cry, and Mary hastily took him into the kitchen and let him help her make lunch.

It was days before the town calmed down again. A psychiatrist from the city and the head of the psychology department of the state university were called in for counsel. The two local radio stations and the nearest TV station donated time for them to broadcast analysis and advice. The daily paper made a big thing of it, with front page stories; then the wire services got it and it was a national sensation. A number of the more susceptible adults caught the fever from the children; there were commitments to mental hospitals, and there was even a woman who tried to gas her three children and herself, to escape the monster. A burglar too smart for his own good had the bright idea of disguising himself with false claws and fangs, was caught ransacking a house, and received a maximum sentence from an indignant judge. An unfortunate big man who had two artificial hands as the result of an accident was mobbed when he went downtown, and was only just rescued by the police.

The schools were shut down for the rest of the week. The police guard was withdrawn from the cemetery, only to be reinstated immediately when angry citizens jammed the switchboard with demands for protection for their children. The committee which was negotiating for removal of the cemetery held an emergency meeting and voted the funds to buy a site which the taxpayers had been complaining would cost too much, and to take steps for transfer of the remains.

Needless to say, even a second detailed search, inch by inch, had disclosed no sign whatever of anybody or anything in the cemetery which did not belong there.

The panic died as abruptly as it had been born. Two weeks later the children were "playing monster" and making a game of it, full of mock screams and giggles. They had a curiously self-satisfied air. Then the Christmas season neared, and they forgot even that.

Back in the small, squalid slum that strung its sordid shacks along the river, Tom Maginn lived on

in his usual alcoholic haze. He snored on the filthy rags he called a bed, and roused himself only to stagger out and panhandle enough for another bottle. When he was hungry, which was seldom, he yelled for Tillie to cook something. When he realized after a long time that he never got an answer, he cursed and reeled over to the cupboard. He found some stale bread and a bit of cheese, mouldy but edible, gulped them down, and staggered back to bed. Damned obstinate kid, no better than her slut of a mother when she was alive, gallivanting around somewhere when her poor old father needed her. He'd beat her within an inch of her life when he got his hands on her. He fell asleep.

The cemetery was so old that nobody had been buried in it for 20 years or more. Before removal could begin, legal arrangements had to be made with representatives of the families who still had any representatives left. In the oldest part, against the back wall, most of the tombstones had long ago crumbled to ruin, or their inscriptions had worn away, and the yellowed records led to no survivors. It was the first part to be ploughed up; the bones that fell out of the rotted coffins were gathered together to be reburied in a mass grave in the new cemetery outside of town.

The old watchman, whose job would end with the removal, spent his days standing over the town workmen; he was a nuisance, but they were sorry for him and let him stay. His sight was still keen, and in the back of his mind was the thought that some of these people might have been buried wearing rings or other jewelry; it was his responsibility, and he had to make sure that if anything of the kind turned up it was put in his custody and not regarded as private treasure-trove until ownership had been established.

So it was he who spotted, in the shallow earth dug up from a long-neglected grave, a curious pile of oddments mixed with decayed coffin-wood and torn rags.

The watchman remembered the day two months before, when he had been overwhelmed by a mob of frightened children. But that affair had just been crazy, and was fortunately forgotten. He must be going crazy himself, to get such an idea. He pushed the stuff aside with his foot under a near-by bush.

Back in the shack beside the river, Tom Maginn was coming out of a long drunk. Soon he would start another; meanwhile he was getting his bearings and seeing things clearly again. What he saw was dirt and disorder and an empty cupboard.

"Tillie!" he shouted. There was no reply.

Maginn stumbled to the doorway. The sun was low, and the street was full of playing children; school had let out long ago. He tried to remember when he had seen his daughter last—hazily he recollected another time when he had roused himself and called for her in vain. He seized a passing urchin by the ear. The kid squealed and struggled.

"Shut up!" Maginn growled. "I ain't hurting you. Where's my Tillie at, do you know?"

"Leggo!" whined the boy. "How would I know?"

"You seen her today?"

"No. Leggo of me!"

Other children had trooped up, attracted by the fracas. The one he held wrenched his ear free and ran. Maginn turned to a little girl.

"You seen that damn kid of mine anywheres?"

The girl, poised for flight, shook her head.

"She ain't been to school, not for weeks and weeks."

"Old drunk Maginn!" yelled a boy from a safe distance. "Old drunk Maginn!" another echoed. "Betcha she run away from you!"

Then they were all shouting at him. He began to weep, tears of self-pity running down his grimy, unshaven cheeks.

"Damned disobedient slut's run away and left me! Left her poor old father all alone!" He sank down on the broken doorstep, sobbing. Delighted, the children whooped with glee. Soon they grew tired of watching the sodden man on the doorstep, and ran off to find other interests. After a while Maginn picked himself up and slammed the door behind him. If she was gone she was gone—her mother had gone before her, the same way—and that was that. He'd get along fine without her—sure he would.

It never even entered his head to report her missing.

At five o'clock the workmen in the cemetery called it a day. The old watchman prepared to lock the gates—the tools were put away already in his little lodge—and follow them. But first he took the heavy paper shopping-bag in which he had brought his lunch, and hobbled back to the grave by the wall. He fished up gingerly the heap of stuff he had hidden, and placed it carefully in the bag. Then he trudged back to the lodge.

Bobbie Frazier came home for lunch, and because it was Saturday found his father there too. Over hot dogs and coleslaw his parents discussed their week-end plans. Dick Frazier smiled down at his tousle-headed son.

"And what have *you* been doing all morning?" he inquired genially.

"Just playing with Jimmie."

Bobbie swallowed half a glass of milk at a gulp and forgot to wipe his mouth. "You know something? That old man down at the cemetery, he's *mean!*"

"Old Tim Wallace? He's been around since I was a kid, and he always seemed good-natured to me. What did he do?"

"Jimmie and me wanted to slide on the big pile of dirt there by the gate, and he wouldn't let us."

"He was perfectly right. It might slip and hurt you."

"That wasn't what he said. He said, 'Scram, you two, or I'll sic the Monster on you!"

Dick and Mary exchanged glances. "Oh, Lord, not *again!*" she exclaimed.

But Bobbie just grinned. "'Scuse me, please," he said, grabbing a handful of cookies. "I told Jimmie I'd come to his house after lunch."

"You be back by five, now," his mother warned him.

"Sure, mommie. 'By now!"

The front door shut behind him. Dick stood up.

"You know what I'm going to do?" he said. "I'm going down there and put the fear of God into old Tim Wallace. He ought to have better sense than to revive that old thing, just when it had got completely calmed down."

"I agree entirely. Wait a minute, Dick, I'm going with you."

Wallace was in the lodge when they parked the car at the cemetery. As they got out he came to the gate, shading his eyes against the sun.

"Mr. Wallace," Dick called, "may we talk to you for a minute?"

"Sure. Come on inside, it's hot out here. Take the good chair, lady. What's on your mind?"

"I'm Mrs. Frazier," Mary said, "and this is my husband."

"Pleased to meetcher."

"Our little boy was down here this morning, with one of his friends, and you ordered them away."

"No place for them," growled the old man. "Darned dangerous, climbing up that loose pile of dirt."

"You're quite right; I'm glad you shooed them off. But—"

"What we object to," Dick interrupted, "is talking to them about that Monster scare a few months ago. We want that forgotten for good, for the children's own sake."

Wallace looked at them craftily, a queer smile on his shrunken lips.

"You from the police or something?" he asked.

"Of course not—I'm an engineer. We just don't want the kids to get hysterical again."

"O.K., I won't say nothing about it any more," the watchman mumbled. He glanced at them again. "Want to see something funny?" he asked softly.

"What do you mean?"

"Something I found when they were digging up a grave in the old section." He reached into the

corner and brought out a paper shopping-bag.

"Dick—I don't know—" Something about the man's manner made Mary feel a little queasy.

"It won't hurt you lady. It ain't alive."

"If you've found anything the police ought to know about, I suggest you take it to them," Dick Frazier said firmly.

"And have them say I was crazy? Here, mister, you say you're an engineer—one of them scientists. Take a look at this."

Dick threw a reassuring glance at his wife. He's probably a little nuts, Mary thought compassionately, all those years here in the cemetery.

One by one the watchman drew from the back and laid on the deal table indistinguishable objects crusted with mud. There were splinters of wood, from some old rotted coffin, probably. There were shredded rags that might once have been clothing. There were splintered pieces of fragile bone—a lot of them. There was a wad of matted brown hair with part of it still in a pigtail.

A humerus and a fibia were almost intact; so was a collar-bone. A broken lower jaw was full of neglected little teeth.

"It's—it's—" Mary clutched the table for support, her head whirling. Dick put his arm around her and held her tight. His face was grey.

"That's what I thought," said Wallace grimly. "What's left of some little girl, ain't it? Wait—that's not all."

A sharp piece of corroded iron. Some more bones—big ones.

"There's a lot more still under the ground there," the watchman said. "I looked."

Dick Frazier pulled himself together.

"Oh, come now, Mr. Wallace," he said heartily. "I can understand that it annoyed you to have us come and complain, but you oughtn't to have frightened my wife like that. It's all right, Mary; these are just from one of the old graves they've dug up—people who died and were buried 50 years ago."

"Oh, yeah?" said Wallace. "That what you think? Suppose I told you these was right underneath the surface, on top of somebody's casket? The pieces of wood came from that, I grant you. But what's this iron thing, like a fang?"

"How should I know? Part of the coffin, I should think."

"Huh. And these here big bones—what are they from?"

Mary gave a little scream.

"Dick!" she gasped. "Look!"

Soberly, they both stared.

The bones were bigger than human. They were badly gnawed, pitted with hundreds of toothmarks.

The little toothmarks of furious children.



Concerning the geological theory which said the Earth was older than the universe, a war-time blackout in Los Angeles, stars that dim and brighten, and a letter to Willy Ley—all brought into revealing focus by F&SF's Boston pundit.

THE FLICKERING YARDSTICK

by Isaac Asimov

ORDINARILY, I WOULDN'T DREAM of writing two astronomical articles in a row. On the assumption that my gentle readers like variety, I try to keep the subject matter well stirred up.

However, there are reasons for an exception here. In order of increasing importance, they are:

1) Of all the sciences, astronomy is the dearest to the heart of a science fiction reader, so that a double dose of that subject should be least insupportable.

2) A truly random distribution of subject matter would include an occasional two in a row, an even more occasional three in a row, and so on. (In fact, if I were to write an infinite number of columns, there would be occasions when I would write a million columns in a row on, say, paleontology. Think of that!)

3) The kindly editor will probably be nervous about it and he will therefore make a special effort to make the rest of the magazine even more sterling and excellent than it customarily is.

4) (and most important) I feel like it.

The reason I feel like is that at the Detroit Convention of beloved memory, Willy Ley (who writes occasionally on scientific subjects himself) told me that a reader had written to him for clarification and confirmation of a statement made by me. The point in question was my statement that the Andromeda galaxy was about 2,000,000 light-years away from us.

I presume the reader was trou-

bled by the fact that most astronomy books give the distance as 750,000 light-years. (I have theories as to why he wrote to Willy Ley and not to me, but they're all uncomplimentary to myself, so I won't mention them.)

Anyway, I explained the matter to Willy briefly and then I thought, why not explain to everyone generally? Why not, indeed?

Astronomers had only the foggiest notions of the size of the Universe prior to World War I. The nearest estimate was made by a Dutch astronomer named Jacobus Cornelis Kapteyn. Beginning in 1906, he supervised a survey of the Milky Way. He photographed small sections of it and counted the stars of the various magnitudes. Assuming them to be average-sized stars (and, on the average, of course they were) he calculated the distance they would have to be in order to show up as dimly as they did.

He ended up with the concept of the Galaxy as a lens-shaped object (something which had been more or less generally accepted since the days of William Herschel, a century before). The Milky Way is simply the cloudy haze formed by the millions of distant stars we see when we look through the Galactic lens the long way. Kapteyn estimated that the Galaxy was 23,000 light-years in extreme diameter and 6,000 light-years thick.

He also decided that the Solar system was located quite near the center of the Galaxy, by the following line of reasoning:

First, the Milky Way cut the heavens into approximately equal halves, so we must be on the median plane of the lens. If we were much above or below the median plane, the Milky Way would be crowded into one half of the sky.

Secondly, the Milky Way was about equally bright all the way around. If we were toward one end or the other of the lens, the Milky Way in the direction of the farther end would be thicker and brighter than the section in the direction of the nearer end.

In short, the Sun is in the center of the Galaxy, more or less, because the heavens are symmetrical, and there you are.

But there was one characteristic of the heavens which showed a disturbing asymmetry. Present in the sky are a number of "globular clusters." These are collections of stars packed rather tightly into a more or less spherical shape. Each globular cluster contains anywhere from a hundred thousand stars to a few million and about two hundred of them exist in our Galaxy.

Well, there's no reason why such clusters shouldn't be evenly distributed in the Galaxy, and if we were at the center, they should be spread evenly all over the sky—but they're not. A large part of them seem to be crowded together

in one small part of the sky, that part covered by the constellations of Sagittarius and Scorpio.

That's the sort of odd fact that bothers astronomers and often proves the gateway to important new views of the universe.

The way to a solution of the problem, and to the new view of the universe, lay through a consideration of a certain kind of variable star; a star, that is, which is constantly varying in brightness; a star which flickers, if you like.

There are a number of different kinds of variable stars, differentiated from one another by the exact pattern of light variation. Some stars flicker for outside reasons; usually because they are eclipsed by a dim companion which gets in the way of our line of sight. The star, Algol, in the constellation Perseus, has a dim companion which gets in our way every 69 hours. During that time of eclipse, Algol loses two-thirds of its light (it is not a total eclipse) in a matter of a couple of hours and regains it as quickly.

More interesting are stars which *really* vary in brightness because of changes in their internal constitution. Some explode with greater or lesser force; some vary all over the lot in irregular fashion for mysterious reasons; and some vary in very regular fashion for equally mysterious reasons.

One of the brighter and more noticeable examples of the last group is a star called Delta Cephei, in the constellation Cepheus. It brightens, dims, brightens, dims, with a period of 5.37 days. From its dimmest point it brightens steadily for about two days, reaching a peak brightness that is just double its brightness at dim point. It then spends about three and a third days fading off to its dim point again. The brightening is distinctly more rapid than the dimming.

From its spectrum, it would seem that Delta Cephei is a pulsating star. That is, it expands and contracts. If it remained the same temperature during this pulsation, it would be easy to understand that it was brightest at peak-size and dimmest at least-size. However, it also changes temperature—it is hottest at peak brightness and coollest at the dim point. The trouble is that the peak temperature and peak brightness come, not at maximum size, but when it is expanding and half-way toward peak size. The lowest temperature and dimmest point comes when it is contracting and halfway toward minimum size. This means that Delta Cephei ends up being about the same size at the peak of brightness and in the trough of dimness. In the first case, though, it is in the process of expansion; in the latter, in the process of contraction.

Why the regular, but non-syn-

chronous, pulsation in size and temperature? That part is still a mystery.

There is enough that is characteristic of Delta Cephei in all this to make astronomers realize, when they found other stars behaving in like fashion, that all must belong to a group of structurally similar stars, which they called "Cepheid variables" in honor of the first of the group.

Cepheids vary among themselves in the length of their period. Some periods are as short as 1 day, some as long as 45 days, with examples all the way through the range. The Cepheids closest to us have periods of about a week.

The brightest and closest Cepheid is none other than the North Star. It has a period of 4 days, but during that time its flicker causes it to vary in brightness by only about ten percent so it's not surprising no non-astronomer notices it, and that astronomers themselves paid more attention to the somewhat dimmer but more drastically changeable Delta Cephei.

There are a number of stars with Cepheid-like variation curves that are to be found in the globular clusters. Their main distinction from the ordinary Cepheids nearer us is that they are extremely short-period. The longest period among these is about a day, and periods as short as an hour and a half are known. These were first called "cluster Cepheids," while ordinary Cepheids were called "classical Cepheids." However, "cluster Cepheids" turned out to be a misnomer, because such stars were found with increasing frequency outside clusters, also.

The cluster Cepheids are now usually called by the name of the best-studied example (just as the Cepheids themselves are). The best-studied example is a star called RR Lyrae, so the cluster Cepheids are called "RR Lyrae variables."

Now none of this seemed to have any connection with the size of the Universe until 1912 when Miss Henrietta Leavitt, studying the Small Magellanic Cloud, came across a couple of dozen Cepheids in them.

(The Large and the Small Magellanic Clouds are two foggy patches that look like detached remnants of the Milky Way. They are visible in the Southern Hemisphere and were first sighted by Europeans during the round-the world voyage of Ferdinand Magellan and his crew back in 1520—whence the name.)

The Magellanic Clouds can be broken up into stars by a good telescope and it is only because they are a long way distant from us that these stars fade into an undifferentiated foggy patch. Because the clouds are so far distant from us, all the stars in one cloud or the other may be considered

about the same distance from us. Whether a particular star is at the near edge of the cloud or the far edge makes little difference. (This is like saying that every man in the state of Washington is roughly the same distance, *i.e.* 3,000 miles, from an individual in Boston.)

This also means that when one star in the Small Magellanic Cloud appears twice as bright as another star, it *is* twice as bright. There is no distance difference to confuse the issue.

Well, when Miss Leavitt recorded the brightness and the period of variation of the Cepheids in the Small Magellanic Cloud, she found a smooth relationship. The brighter the Cepheid, the longer the period. She prepared a graph correlating the two and this is called the "period-luminosity curve."

Such a curve could not have been discovered from the Cepheids near us, just because of the confusing distance difference. For instance, Delta Cephei is more luminous than the North Star and, therefore, has a longer period. But the North Star is considerably closer to us than is Delta Cephei, so that the North Star seems brighter to us. For that reason, the longer period *seems* to go with the dimmer star. Of course, when we know the actual distances of the North Star and of Delta Cephei, we can straighten the matter out, but at that time the distances were not known.

Once the period-luminosity curve was established, astronomers promptly made the assumption that it held for all Cepheids, and were then able to make a scale model of the universe. That is, if astronomers spotted two Cepheids with equal periods, they could assume they were also equal in actual luminosity. If Cepheid A seemed only one-fourth as bright as Cepheid B, it could be only because Cepheid A was twice as distant from us as was Cepheid B. (Brightness varies inversely as the square of the distance.) Cepheids of different periods could be placed, relative to us, with only slightly more trouble.

With all the Cepheids in relative place, presumably astronomers would need to know the actual distance in light-years to only one of them, in order to know the actual distance to all the rest.

There was only one trouble here. The sure method of determining the distance of a star was to measure its parallax. At distances of more than 100 light-years, however, the parallax becomes too small to measure. And, unfortunately, even the nearest Cepheid, the North Star, is several times that distance from us.

Astronomers were forced into long-drawn-out, complex, statistical analyses of medium-distant (not globular) star clusters (the details of which wild horses couldn't drag out of me, mainly because

I haven't yet come across an explanation of the method that I am sure I understand). In this way, they determined the actual distance of some of those clusters, incuding the Cepheids they contained.

The scale model of the Universe thus became a real map. The Cepheid variables had become flickering yardsticks in the hands of the astronomers.

In 1918, Harlow Shapley started calculating the distance of the various globular clusters from the RR Lyrae variables they contained, using Miss Leavitt's period-luminosity curve. His figures turned out to be a little too large and were corrected downward during the next decade, but the new picture of the Galaxy which grew out of his measurements has survived.

The globular clusters are distributed spherically above and below the median plane of the Galaxy. The center of this sphere of globular clusters is in the plane of the Galactic lens, but at a spot some tens of thousands of light-years from us in the direction of the constellation Sagittarius.

That explained why most of the globular clusters were to be found in that direction.

It seemed to Shapley a natural assumption that the globular clusters centered about the center of the Galaxy and later evidence from other directions bore him out. So here we are, not in the center of the Galaxy at all, but well out to one side.

We are still in the median plane of the Galaxy, for the Milky Way does split the heavens in half. But how account for the fact that the Milky Way is equally bright throughout if we are not, in fact, centered? The answer is that the median plane on the outskirts of the Galaxy (where we happen to be) is loaded with dust clouds. These happen to lie between ourselves and the Galactic center, obscuring it completely.

The result is that, with or without optical telescopes, we can see only our portion of the Galactic outskirts. We *are* in the center of that part of the Galaxy which we can see optically, and that part is not too far off in size from Kapteyn's estimate. Kapteyn's error (which was excusable) was in assuming that what we could see was all the Galaxy there was. It wasn't.

The final model of the Galaxy, now thought to be correct, is that of a lens-shape that is 100,000 light-years across and 20,000 light-years thick at the center. The thickness falls off as the edge is approached and in the position of the Sun (30,000 light-years from the center and two-thirds of the way toward the extreme edge of the Galaxy) is only 3,000 light-years thick.

Even before the Galactic measurements had been finally determined, the Cepheids in the Magellanic Clouds had been used to determine their distance. Those turned out to be rather more than 100,000 light-years distant (Our best modern figures are 150,000 light-years for the Large and 170,000 light-years for the Small Magellanic Cloud.) They are close enough to the body of our Galaxy and small enough in comparison, to be fairly considered "satellite galaxies" of ours.

From the rate at which our Sun and neighboring stars are travelling in their 200,000,000 year circuit of the Galactic center, it is possible to calculate the mass of the Galactic center (which contains most of the stars in the Galaxy) and it turns out to be something like 90,000,000,000 times that of our Sun. If we consider our Sun to be an average star in mass, then we can fairly estimate the Galaxy as a whole to contain 100,000,000,000 stars. In comparison, the two Magellanic Clouds together contain a total of about 6,000,000,000.

The question in the 1920's was whether anything existed in the Universe outside our Galaxy and its satellites. Suspicion rested on certain dim, foggy structures, of which a cloudy patch in the constellation Andromeda was the most spectacular. (It was about half the size of the full moon to the naked eye and was called the Andromeda Nebula—"nebula" coming from a Greek word for "cloud.")

There were some nebulae which were known to be parts of our Galaxy because they contained hot (and not too-distant) stars that were the cause of their luminosity. The Orion Nebula is an example. The Andromeda Nebula, however, contained no such stars that anyone could see, and seemed to be self-luminous. Could it be then a patch of haze that could be broken up into many far, far distant stars (with the proper magnification), as could the Milky Way and the Magellanic Clouds? Since the same telescopes that resolved the Milky Way and the Magellanic Clouds did not manage to do the same for the Andromeda Nebula, could it be that the Andromeda Nebula was far more distant?

The answer came in 1924, when Edwin Powell Hubble turned the new 100-inch telescope at Mt. Wilson on the Andromeda Nebula and took photographs that showed the outskirts of the Nebula resolved into stars. Furthermore, he found Cepheids and used them to determine the distance. The Andromeda Nebula turned out to be 750,000 light-years distant and this is the value found in all the astronomy books over the next thirty years.

Allowing for the distance, the Andromeda Nebula was obviously an object of galactic size, so it is now called the Andromeda galaxy. Hubble established the fact that many other nebulae of the Andromeda type were galaxies, even more distant than the Andromeda galaxy (which is a near neighbor of ours, in fact). The size of the Universe sprang instantly from a diameter in the hundreds of thousands of light-years to one in the hundreds of millions.

However, there were a few disturbing facts which lingered. For one thing, the other galaxies all seemed to be considerably smaller than our own. Why should our own Galaxy be the one out-sized member of a large group?

For another, the Andromeda galaxy had a halo of globular clusters just as our own Galaxy did. Their clusters, however, were considerably smaller and dimmer than ours. Why?

Thirdly, allowing for the distance of the galaxies and the speed at which the Universe was known to be expanding (that's another story for another article some day), it could have been only two billion years ago that all the galaxies were squashed together at some central starting point. The trouble with that was that the geologists swore up and down that the earth itself was considerably older than two billion years. How could the earth be older than the Universe?

The beginning of an answer came in 1942, when Walter Baade took another look at the Andromeda galaxy with the 100-inch telescope. Until then only the outer fringes of the galaxy had been broken up into stars; the central portions had remained a featureless fog. But now Baade had an unusual break. It was wartime and Los Angeles was blacked out. That removed the dim background of distant city light and improved "seeing."

For the first time, photographs were taken that resolved the inner portions of the Andromeda galaxy. Baade could study the very brightest stars of the interior.

It turned out that there were striking differences between the brightest stars of the inner regions and those of the outskirts. The brightest stars in the interior were reddish while those of the outskirts were bluish. That alone accounted for the greater ease with which photographic plates picked up the outer stars, since blue more quickly affects the plates than red does (unless special plates are used). Add to this the fact that the brightest (bluish) stars on the outskirts were up to a hundred times as bright as the brightest (reddish) stars in the interior.

To Baade, it seemed there were two sets of stars in the Andro-

meda galaxy with different structures and history. He called the stars of the outskirts, Population I, and those of the interior, Population II.

Population II is the dominant star-group of the Universe, making up perhaps 98 percent of the total. They are, by and large, old, moderately-sized stars fairly uniform in characteristics and moving about in dust-free surroundings.

Population I stars are found only in the dust-choked spiral arms of those galaxies that have spiral arms. On the whole, they are far more scattered in age and structure than the Population II stars, including very young, hot and luminous stars. (Perhaps Population I stars sweep up the dust through which they pass, gradually growing more massive, hotter and brighter—and shortening their lives, as human beings do, by overeating.)

Our own Sun, by the way, happens to be occupying a spiral arm so that the familiar stars of our sky belong to Population I. Our own Sun, fortunately, is an old, quiet, settled star not typical of that turbulent group.

Once the 200-inch telescope was set up on Mount Palomar, Baade continued his investigations of the two populations. There were Cepheid variables in both populations and this brought up an interesting point.

The Cepheids of the Magellanic Clouds (which have no spiral arms) belong to Population II. So do the RR Lyrae Variables in the globular clusters. So do the Cepheids of the moderately-distant non-globular clusters for which the actual distances were first worked out statistically. In other words all the work done on the size of the Galaxy and the distance of the Magellanic Clouds, as well as on the original establishment of the Cepheid yardstick, had been done on Population II Cepheids. So far, so good.

But what about the distance of the outer galaxies? The only stars that could be made out in the outer galaxies such as Andromeda by Hubble and his successors were the extra-large giants of the spiral arms. Those extra-large giants were Population I, and the Cepheids among them were Population I Cepheids. Since Population I is so different from Population II, could one be certain that the Population I Cepheids would fit into a period-luminosity curve which had been worked out from Population II Cepheids only?

Baade began a painstaking comparison of the Population II Cepheids in the globular clusters with the Population I Cepheids in our own neighborhood and in 1952 announced that the latter did *not* fit the Leavitt period-luminosity curve. For any particular period, a Population I Cepheid

was between four and five times as luminous as a Population II Cepheid would be. A new period-luminosity curve was drawn for the Population I Cepheids.

Well, then, if the Population I Cepheids of the Andromeda spiral arms were each considerably more than four times brighter than had been thought, then to be as bright as they seemed (the apparent brightness stayed the same of course) they had to be considerably more than twice as far away as had been thought. The flickering yardstick of the Cepheids turned out to be roughly three times as long as had been believed.

All the nearer galaxies, which had been measured by that yardstick were suddenly pushed a triple distance out into space. The further galaxies whose distances had been estimated by procedures based on the "known" distances of the nearer galaxies, all retreated likewise.

The Universe had again increased in size, and the 200-inch telescope was penetrating, not somewhat less than a billion light-years into space, but a full two billion light-years.

This solved the puzzles of the galaxies. If all the galaxies were about three times the distance that had been thought, they must also be larger (in actuality) than had been thought, to be as large as they seemed. With all the galaxies suddenly grown up, our own Galaxy is reduced to run-of-the-mill size and is no longer the one outsize member of the family. In fact, the Andromeda galaxy is four or five times the size of ours in terms of numbers of stars contained.

Secondly, the globular clusters around Andromeda, being actually much further away than had been thought, must be more luminous in actual fact that had been thought—indeed they worked out to be quite comparable to our own in brightness.

Finally, with the galaxies much further spread apart, but with their actual speeds of recession unaffected by the change (the measurement of speed of recession does not depend on the distance of the object being tested) it would take a much longer period for the universe to have reached its present state from an original compressed hunk of matter. This meant the age of the Universe had to be, at minimum, five or even six billion years. With this figure, geologists were content. They no longer had to consider the earth to be older than the Universe.

But the main thing, as far a this article is concerned, is that with the use of the new-length flickering yardstick, the Andromeda galaxy turns out to be (as is stated in the most recent astronomy texts) about 2,000,000 light-years distant from us.

Which is what I set out to explain.

BOOKS



CONCERNING ENCHANTMENTS

by Damon Knight

ENCHANTED BEGGAR, by Norman Matson (Lippincott, $3.50) —originally published, in 1926, as FLECKER'S MAGIC—offers itself as the gentle, unassuming story of Spike Flecker, a young red-headed art student in Paris. Spike is living on irregular checks from his grocer uncle in Minnesota, and his talent so far is nothing spectacular; the only extraordinary thing about him is that he is so very much aware and alive.

The first thing you notice about this story is its pleasing simplicity, making no demands, no effort to shock or startle. The next, that everything in the story is observed with the clearest and most innocent vision. Next, that this vision somehow draws beauty out of common things; for instance, a boarding-house meal eaten by Spike in chapter 14. If there's magic in this story, it is not brought by the witch who offers Spike a wishing ring; the magic is in the story itself, on every page.

Considered as fantasy, within the narrow definition of our field, this book is an astonishing success. The old problem—if you could have any one wish, what would you choose?—here seems as fresh as if newly invented. Reading of Spike's sleepless agonies, you'll find yourself lacking the usual self-satisfied conviction that *you* would know how to handle this, even if the hero is too stupid.

But this does not give the measure of the book. It isn't an exercise on a familiar theme; nothing in it is perfunctory or artificial. What it is, is almost impossible to convey: it escapes all categories, is uniquely itself.

Nowadays, when the novels we read are concerned, almost as a matter of course, with hatred, violence and misery, it comes as a shock to realize that this engrossing book is about human

goodness and the joy of living.

If this were a fantasy novel of the machine-made variety, when it turns out that the witch has given Flecker the ring in hopes he will cause some enormous catastrophe, the hero ought surely to go charging off and inflict on the villainess some gorily appropriate revenge. We get to know her better instead, and she turns out to be a wonderfully loony old girl, anxiously dithering in a garret full of dusty notebooks—her incomplete and uncompletable history of the world. And: this visit to the witch's garret, which would have been satisfactory enough in itself, and certainly would have contented a writer who only wanted to advance the plot, is embellished by a couple of charming fables told by the witch, one about the beginning of the world, one about its end—as if this were a musical comedy, and one of the leading characters had stepped forward to stage center and burst into song.

I'm trying to say that this is a work which shows evidence not only of skill and intelligence, but of love. It's a rich, warm confection of a book, full of unexpected good things. Don't miss.

Rex Gordon, author of FIRST ON MARS (Ace, 1957), has now produced a companion volume of sorts, called FIRST TO THE STARS (Ace, 35¢). Like the earlier book, this is an impressively original work. More uneven than FIRST ON MARS, it's poor enough at its worst, but at its best it is very, very good.

Gordon has a knack, rare in these jaded times, for interplanetary adventure soberly and convincingly told. His thinking often seems to have as many holes in it as a Swiss cheese (e.g., after a remarkably convincing argument that the crew of the first spaceship would necessarily consist of one man and one woman, he spoils it all by having them paired at random, and so incompatible that they can barely take time off from quarreling to pilot the ship); but between the holes, his writing is full of mental nourishment.

The book is divided into four parts, of which the first is the poorest: taking off for Mars, the hero and heroine, with some perfunctory muttering about Einsteinian relativity, find themselves heading for the stars instead. (Does anybody remember Karl van Kampen's "The Irrelevant"?)

After this comic-strip beginning, sketchy in its characterizations as it is careless in its science (" 'By the general theory of relativity,' I said, 'a body traveling at the speed of light would acquire infinite size and mass' "), the ship crashes on an alien planet, and part two begins.

Part two, which deals with the

man's and woman's grim struggle for race survival, is Gordon at his best. Slowly and soberly, unaided by dramatic tricks, he shows you what it would be like to begin at the bottom of the cultural ladder, without tools, without any hope except for your children. The ending of part two is so unexpectedly honest that it comes as a crushing surprise.

Part three takes the story to still another planet, inhabited by an alien culture, and here, though the novel loses much of its powerful simplicity, it gains in subtlety. The remainder of the story, including part four, which is a brilliant outgrowth of part three, is mature science fiction—conflict, danger, mystery, all against a sustained background of intellectual excitement. For adult consumption.

Readers who remember Kurt Vonnegut's THE PLAYER PIANO with wistful pleasure are in for a surprise: Vonnegut's second s-f novel, THE SIRENS OF TITAN (Dell, 35¢), is nothing like that at all. THE PLAYER PIANO was subtle, ironic and cool, with a surface smooth as gelatin, and all the jags buried deep under. THE SIRENS OF TITAN is jazzy, impudent, sarcastic, and about as smooth as gravel pudding; in a style like Harvey Kurtzman trying to imitate Doc Savage and Alfred Bester simultaneously, it piles one deadpan extravagance on another: superlatives, shock-for-shock's sake, epigrams, parodies, boyish vulgarity. The plot concerns a Groton type named Wilson Niles Rumfoord, who "had run his private space ship right into the heart of an uncharted chrono-synclastic infundibulum." This last sounds like a Sheckley bibble-bibble, but Vonnegut explains it:

"Chrono (kroh-no) means time. Synclastic (sin-class-tick) means curved toward the same side in all directions, like the skin of an orange. Infundibulum (in-fun-dib-u-lum) is what the ancient Romans like Julius Caesar and Nero called a funnel. If you don't know what a funnel is, get Mommy to show you one."

What this adds up to is that [a] Rumfoord (and his dog Kazak, who was also in the private space ship) is scattered in time and space along a helix with one end in the sun and the other in Betelgeuse; and [b] Rumfoord, who materializes on Earth and other solar bodies whenever they intercept his helix, can see all aspects of truth at once and has accordingly become a sort of highly refined (but nasty) demigod.

Some of this is funny as hell, some is grotesquely moving, some awful by any imaginable standards. But Vonnegut shares one priceless quality with Bester (and van Vogt, and other innovators):

whereas most writers use the same story pieces, and only try to put them together in mildly novel ways, Vonnegut's pieces are all different—e.g., [1] diamond-shaped, music-eating, paper-thin cave creatures on Mercury (they form harmonious patterns on the walls, and "reproduce by flaking. The young, when shed by a parent, are indistinguishable from dandruff"); [2] a financier who corners practically everything by interpreting the Book of Genesis as a coded series of buy & sell orders; [3] Schliemann breathing (i.e., inhaling through the lower intestine when in airless places), and so on, and on, and on.

You may not like all of it; you may not even be able to decide whether you like it or not; but read it.

Paul I. Wellman, the popular historian, historical novelist, and writer of political biographies, has made an essay into supernatural fantasy, I guess his first, in THE FIERY FLOWER (Doubleday, $3.95). The early chapters are craftsmanlike and interesting as the author introduces us to an actress named Elsa Meade—earnest, shallow, not terribly bright, but awfully believable. After Elsa's plane crashes, however, and she wakes up on a mysterious island in the custody of two Hollywood-Hawaiian types, Jon [1] and Vera, the story slows to a yawn. Attentive to the pudding-like characters of his two primitives (one swims like a submarine and the other hurtles through the trees like Tarzan, but their dialog

[1] Since the gentleman's name is never spelled out or written down, one of the major mysteries of our time is how everybody *instinctively realizes* it has no *h* in it. There is a whole class of love stories of a certain type in which the hero, for some weird reason, is invariably named Jon. Remind me to write a monograph about this some time.

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never rises above the "Ugh, you Cheeta" level), the author seems to have forgotten everything about Elsa except that she's a mammal. The narrative is padded out five times beyond its natural length by Elsa's inexplicable failure to ask obvious questions or look in obvious places; and when the mystery of the two primitives is finally unveiled, oh, God, what banality!

A TREASURY OF GREAT SCIENCE FICTION, edited by Anthony Boucher (Doubleday, 2 vols., $5.95), is a generous double helping of s-f, most of it familiar—four novels, including van Vogt's sprawling, powerful THE WEAPON SHOPS OF ISHER and Alfred Bester's THE STARS MY DESTINATION; twelve novelets and short novels, including Robert A. Heinlein's unforgettable THE MAN WHO SOLD THE MOON; and eight short stories, of which the most notable are George P. Elliott's "Sandra," from this magazine, and a curious long fantasy about an un-assassinated Lincoln, "The Lost Years," by Oscar Lewis. For newcomers to s-f, one could hardly ask anything better; for people with small s-f libraries, this will provide a hefty chunk of the best and near-best.

Benjamin Appell is a novelist who writes contemporary stories about New York; this is all I know about him, except that he is very highly thought of by paperback editors. But THE FUNHOUSE, his first excursion into s-f (Ballantine, 35¢), is incredibly bad—labored, dull, full of witless neologisms (TSMD, U-LATU, A-I-D, St. Ewagiow, ad naus.), each one explained by a long, would-be-funny footnote. For the wastebasket.

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Après nous

DOCTOR BOSWELL'S TIME MACHINE was actually four time machines, four devices looking like the work of an insane clockmaker. Arranged in a rectangle (or, to be just a shade more precise, a diamond pattern) and set to functioning, they produced the Boswell Effect.

It is by now a truism that only three people in the entire world ever fully undersood the Boswell Effect. One of these was the laconic Professor Spencer Peabody of ULCA—whose abrupt departure for the Amazonian slopes of the Andes with a portable sawmill later created a furore in academic circles—and was almost a nine days wonder (the attention of the keen-eyed press was diverted on the eighth day by an axe-murder of uncommon juiciness).

"As yet," Dr. Boswell repeated to Professor Peabody just prior to the first test of the machines, "I have no way of knowing how long a period of time is represented by each graduation of the dial. It is my hope that the control animals will return with specimens of organic matter—either caught in their pelts, or in process of ingestion—and that, by an entirely novel use of the radio-carbon process, we shall learn how far into the future each has travelled."

The Boswell Effect, for reasons as yet only dimly guessed at, could not be used to visit the past.

"Quite," said Professor Peabody.

Dr. Boswell lifted the guinea-pig out of its cage and set it down in the center of the diamond. He adjused the dial to one mark, threw the switch. Then they had lunch. Then Dr. Boswell reversed the switch. But nothing happened. With no more than a philosophical shrug the two men selected a hamster, repeated the experiment, setting the dial ahead two marks. The result was again negative.

"After supper we shall try another hamster, at the next mark," said Dr. Peabody; "and we will give this one even more time."

"Quite," said Professor Peabody. They had supper, and the third hamster was presently sent into the future. Several hours later Dr. Boswell for the third time reversed the switch. Abruptly, with a twitch and a shimmer, the hamster came.

Its once sleek pelt was rough and damp and matted. Its eyes were no longer bright, but dull. It panted for air with feeble movements. But —held firmly in its teeth was a piece of organic matter.

"I am not a botanist," said Dr. Boswell, with his customary modesty, "but I think—I rather incline to think—isn't that an olive leaf?"

"Quite, said Professor Peabody.

—AVRAM DAVIDSON

Mr. Simak, an award-winner and long time star in science fiction, demonstrates two of his particular talents—intriguing ideas and warm characterization—in the following novelet about a robot with 600 years of human experience, and an urge to remain himself in the face of bureaucracy and the cold loneliness of nomadic life in space.

ALL THE TRAPS OF EARTH

by Clifford D. Simak

THE INVENTORY LIST WAS LONG. On its many pages, in his small and precise script, he had listed furniture, paintings, china, silverware and all the rest of it—all the personal belongings that had been accumulated by the Barringtons through a long family history.

And now that he had reached the end of it, he noted down himself, the last item of them all:

One domestic robot, Richard Daniel, antiquated but in good repair.

He laid the pen aside and shuffled all the inventory sheets together and stacked them in good order, putting a paper weight upon them—the little exquisitely carved ivory paper weight that Aunt Hortense had picked up that last visit she had made to Peking.

And having done that, his job came to an end.

He shoved back the chair and rose from the desk and slowly walked across the living room, with all its clutter of possessions from the family's past. There, above the mantle, hung the sword that ancient Jonathon had worn in the War Between the States, and below it, on the mantlepiece itself, the cup the Commodore had won with his valiant yacht, and the jar of moon-dust that Tony had brought back from Man's fifth landing on the Moon, and the old chonometer that had come from the long-scrapped family spacecraft that had plied the asteroids.

And all around the room, almost cheek by jowl, hung the family portraits, with the old dead faces staring out into the world that they had helped to fashion.

And not a one of them from the last six hundred years, thought Richard Daniel, staring at them

one by one, that he had not known.

There, to the right of the fireplace, old Rufus Andrew Barrington, who had been a judge some two hundred years ago. And to the right of Rufus, Johnson Joseph Barrington, who had headed up that old lost dream of mankind, the Bureau of Paranormal Research. There, beyond the door that led out to the porch, was the scowling pirate face of Danley Barrington, who had first built the family fortune.

And many others—administrator, adventurer, corporation chief. All good men and true.

But this was at an end. The family had run out.

Slowly Richard Daniel began his last tour of the house—the family room with its cluttered living space, the den with its old mementos, the library and its rows of ancient books, the dining hall in which the crystal and the china shone and sparkled, the kitchen gleaming with the copper and aluminum and the stainless steel, and the bedrooms on the second floor, each of them with its landmarks of former occupants. And finally, the bedroom where old Aunt Hortense had finally died, at long last closing out the line of Barringtons.

The empty dwelling held a not-quite-haunted quality, the aura of a house that waited for the old gay life to take up once again. But it was a false aura. All the portraits, all the china and the silverware, everything within the house would be sold at public auction to satisfy the debts. The rooms would be stripped and the possessions would be scattered and, as a last indignity, the house itself be sold.

Even he, himself, Richard Daniel thought, for he was chattel, too. He was there with all the rest of it, the final item on the inventory.

Except that what they planned to do with him was worse than simple sale. For he would be changed before he was offered up for sale. No one would be interested in putting up good money for him as he stood. And, besides, there was the law—the law that said no robot could legally have continuation of a single life greater than a hundred years. And he had lived in a single life six times a hundred years.

He had gone to see a lawyer and the lawyer had been sympathetic, but had held forth no hope.

"Technically," he had told Richard Daniel in his short, clipped lawyer voice, "you are at this moment much in violation of the statute. I completely fail to see how your family got away with it."

"They liked old things," said Richard Daniel. "And, besides, I was very seldom seen. I stayed mostly in the house. I seldom ventured out."

"Even so," the lawyer said, "there are such things as records. There must be a file on you . . ."

"The family," explained Richard Daniel, "in the past had many influential friends. You must understand, sir, that the Barringtons, before they fell upon hard times, were quite prominent in politics and in many other matters."

The lawyer grunted knowingly.

"What I can't quite understand," he said, "is why you should object so bitterly. You'll not be changed entirely. You'll still be Richard Daniel."

"I would lose my memories, would I not?"

"Yes, of course you would. But memories are not too important. And you'd collect another set."

"My memories are dear to me," Richard Daniel told him. "They are all I have. After some six hundred years, they are my sole worthwhile possession. Can you imagine, counselor, what it means to spend six centuries with one family?"

"Yes, I think I can," agreed the lawyer. "But now, with the family gone, isn't it just possible the memories may prove painful?"

"They're a comfort. A sustaining comfort. They make me feel important. They give me perspective and a niche."

"But don't you understand? You'll need no comfort, no importance once you're reoriented. You'll be brand new. All that you'll retain is a certain sense of basic identity—*that* they cannot take away from you even if they wished. There'll be nothing to regret. There'll be no leftover guilts, no frustrated aspirations, no old loyalties to hound you."

"I must be myself," Richard Daniel insisted stubbornly. "I've found a depth of living, a background against which my living has some meaning. I could not face being anybody else."

"You'd be far better off," the lawyer wearily. "You'd have a better body. You'd have better mental tools. You'd be more intelligent."

Richard Daniel got up from the chair. He saw it was no use.

"You'll not inform on me?" he asked.

"Certainly not," the lawyer said. "So far as I'm concerned, you aren't even here."

"Thank you," said Richard Daniel. "How much do I owe you?"

"Not a thing," the lawyer told him. "I never make a charge to anyone who is older than five hundred."

He had meant it as a joke, but Richard Daniel did not smile. He had not felt like smiling.

At the door he turned around.

"Why?" he was going to ask. "Why this silly law."

But he did not have to ask—it was not hard to see.

Human vanity, he knew. No

human being lived much longer than a hundred years, so neither could a robot. But a robot, on the other hand, was too valuable simply to be junked at the end of a hundred years of service, so there was this law providing for the periodic breakup of the continuity of each robot's life. And thus no human need undergo the psychological indignity of knowing that his faithful serving man might manage to outlive him by several thousand years.

It was illogical, but humans were illogical.

Illogical, but kind. Kind in many different ways.

Kind, sometimes, as the Barrington, had been kind, though Richard Daniel. Six hundred years of kindness. It was a prideful thing to think about. They had even given him a double name. There weren't many robots nowadays who had double names. It was a special mark of affection and respect.

The lawyer having failed him, Richard Daniel had sought another source of help. Now, thinking back on it, standing in the room where Hortense Barrington had died, he was sorry that he'd done it. For he had embarrassed the religico almost unendurably. It had been easy for the lawyer to tell him what he had. Lawyers had the statutes to determine their behavior, and thus suffered little from agonies of personal decision.

But a man of the cloth is kind if he is worth his salt. And this one had been kind instinctively as well as professionally, and that had made it worse.

"Under certain circumstances," he had said somewhat awkwardly, "I could counsel patience and humility and prayer. Those are three great aids to anyone who is willing to put them to his use. But with you I am not certain."

"You mean," said Richard Daniel, "because I am a robot."

"Well, now . . ." said the minister, considerably befuddled at this direct approach.

"Because I have no soul?"

"Really," said the minister miserably, "you place me at a disadvantage. You are asking me a question that for centuries has puzzled and bedeviled the best minds in the church."

"But one," said Richard Daniel, "that each man in his secret heart must answer for himself."

"I wish I could," cried the distraught minister. "I truly wish I could."

"If it is any help," said Richard Daniel, "I can tell you that sometimes I suspect I have a soul."

And that, he could see, had been most upsetting for this kindly human. It had been, Richard Daniel told himself, unkind of him to say it. For it must have been confusing, since coming from himself it was not opinion only, but expert evidence.

So he had gone away from the minister's study and come back to the empty house to get on with his inventory work.

Now that the inventory was all finished and the papers stacked where Dancourt, the estate administrator, could find them when he showed up in the morning, Richard Daniel, had done his final service for the Barringtons and now must begin doing for himself.

He left the bedroom and closed the door behind him and went quietly down the stairs and along the hallway to the little cubby, back of the kitchen, that was his very own.

And that, he reminded himself with a rush of pride, was of a piece with his double name and his six hundred years. There were not too many robots who had a room, however small, that they might call their own.

He went into the cubby and turned on the light and closed the door behind him.

And now, for the first time, he faced the grim reality of what he meant to do.

The cloak and hat and trousers hung upon a hook and the galoshes were placed precisely underneath them. His attachment kit lay in one corner of the cubby and the money was cached underneath the floor board he had loosened many years ago to provide a hiding place.

There was, he told himself, no point in waiting. Every minute counted. He had a long way to go and he must be at his destination before morning light.

He knelt on the floor and pried up the loosened board, shoved in a hand and brought out the stacks of bills, money hidden through the years against a day of need.

There were three stacks of bills, neatly held together by elastic bands—money given him throughout the years as tips and Christmas gifts, as birthday presents and rewards for little jobs well done.

He opened the storage compartment located in his chest and stowed away all the bills except for half a dozen which he stuffed into a pocket in one hip.

He took the trousers off the hook and it was an awkward business, for he'd never worn clothes before except when he'd tried on these very trousers several days before. It was a lucky thing, he thought, that long-dead Uncle Michael had been a portly man, for otherwise the trousers never would have fit.

He got them on and zippered and belted into place, then forced his feet into the overshoes. He was a little worried about the overshoes. No human went out in the summer wearing overshoes. But it was the best that he could do. None of the regular shoes he'd found in the house had been nearly large enough.

He hoped no one would notice, but there was no way out of it. Somehow or other, he had to cover up his feet, for if anyone should see them, they'd be a giveaway.

He put on the cloak and it was a little short. He put on the hat and it was slightly small, but he tugged it down until it gripped his metal skull and that was all to the good, he told himself; no wind could blow it off.

He picked up his attachments —a whole bag full of them that he'd almost never used. Maybe it was foolish to take them along, he thought, but they were a part of him and by rights they should go with him. There was so little that he really owned—just the money he had saved, a dollar at a time, and this kit of his.

With the bag of attachments clutched underneath his arm, he closed the cubby door and went down the hall.

At the big front door he hesitated and turned back toward the house, but it was, at the moment, a simple darkened cave, empty of all that it once had held. There was nothing here to stay for—nothing but the memories, and the memories he took with him.

He opened the door and stepped out on the stoop and closed the door behind him.

And now, he thought, with the door once shut behind him, he was on his own. He was running off. He was wearing clothes. He was out at night, without the permission of a master. And all of these were against the law.

Any officer could stop him, or any citizen. He had no rights at all. And he had no one who would speak for him, now that the Barringtons were gone.

He moved quietly down the walk and opened the gate and went slowly down the street, and it seemed to him the house was calling for him to come back. He wanted to go back, his mind said that he should go back, but his feet kept going on, steadily down the street.

He was alone, he thought, and the aloneness now was real, no longer the mere intellectual abstract he'd held in his mind for days. Here he was, a vacant hulk, that for the moment had no purpose and no beginning and no end, but was just an entity that stood naked in an endless reach of space and time and held no meaning in itself.

But he walked on and with each block that he covered he slowly fumbled back to the thing he was, the old robot in old clothes, the robot running from a home that was a home no longer.

He wrapped the cloak about him tightly and moved on down the street and now he hurried, for he had to hurry.

He met several people and they paid no attention to him. A few

cars passed, but no one bothered him.

He came to a shopping center that was brightly lighted and he stopped and looked in terror at the wide expanse of open, brilliant space that lay ahead of him. He could detour around it, but it would use up time and he stood there, undecided, trying to screw up his courage to walk into the light.

Finally he made up his mind and strode briskly out, with his cloak wrapped tight about him and his hat pulled low.

Some of the shoppers turned and looked at him and he felt agitated spiders running up and down his back. The galoshes suddenly seemed three times as big as they really were and they made a plopping, squashy sound that was most embarrassing.

He hurried on, with the end of the shopping area not more than a block away.

A police whistle shrilled and Richard Daniel jumped in sudden fright and ran. He ran in slobbering, mindless fright, with his cloak streaming out behind him and his feet slapping on the pavement.

He plunged out of the lighted strip into the welcome darkness of a residential section and he kept on running.

Far off he heard the siren and he leaped a hedge and tore across the yard. He thundered down the driveway and across a garden in the back and a dog came roaring out and engaged in noisy chase.

Richard Daniel crashed into a picket fence and went through it to the accompaniment of snapping noises as the pickets and the rails gave way. The dog kept on behind him and other dogs joined in.

He crossed another yard and gained the street and pounded down it. He dodged into a driveway, crossed another yard, upset a birdbath and ran into a clothesline, snapping it in his headlong rush.

Behind him lights were snapping on in the windows of the houses and screen doors were banging as people hurried out to see what the ruckus was.

He ran on a few more blocks, crossed another yard and ducked into a lilac thicket, stood still and listened. Some dogs were still baying in the distance and there was some human shouting, but there was no siren.

He felt a thankfulness well up in him that there was no siren, and a sheepishness, as well. For he had been panicked by himself, he knew; he had run from shadows, he had fled from guilt.

But he'd thoroughly roused the neighborhood and even now, he knew, calls must be going out and in a little while the place would be swarming with police.

He'd raised a hornet's nest and

he needed distance, so he crept out of the lilac thicket and went swiftly down the street, heading for the edge of town.

He finally left the city and found the highway. He loped along its deserted stretches. When a car or truck appeared, he pulled off on the shoulder and walked along sedately. Then when the car or truck had passed, he broke into his lope again.

He saw the spaceport lights miles before he got there. When he reached the port, he circled off the road and came up outside a fence and stood there in the darkness, looking.

A gang of robots was loading one great starship and there were other ships standing darkly in their pits.

He studied the gang that was loading the ship, lugging the cargo from a warehouse and across the area lighted by the floods. This was just the setup he had planned on, although he had not hoped to find it immediately—he had been afraid that he might have to hide out for a day or two before he found a situation that he could put to use. And it was a good thing that he had stumbled on this opportunity, for an intensive hunt would be on by now for a fleeing robot, dressed in human clothes.

He stripped off the cloak and pulled off the trousers and the overshoes; he threw away the hat. From his attachments bag he took out the cutters, screwed off a hand and threaded the cutters into place. He cut the fence and wiggled through it, then replaced the hand and put the cutters back into the kit.

Moving cautiously in the darkness, he walked up to the warehouse, keeping in its shadow.

It would be simple, he told himself. All he had to do was step out and grab a piece of cargo, clamber up the ramp and down into the hold. Once inside, it should not be difficult to find a hiding place and stay there until the ship had reached first planetfall.

He moved to the corner of the warehouse and peered around it and there were the toiling robots, in what amounted to an endless chain, going up the ramp with the packages of cargo, coming down again to get another load.

But there were too many of them and the line too tight. And the area too well lighted. He'd never be able to break into that line.

And it would not help if he could, he realized despairingly—because he was different from those smooth and shining creatures. Compared to them, he was like a man in another century's dress; he and his six-hundred-year-old body would stand out like a circus freak.

He stepped back into the shad-

ow of the warehouse and he knew that he had lost. All his best-laid plans, thought out in sober, daring detail, as he had labored at the inventory, had suddenly come to naught.

It all came, he told himself, from never going out, from having no real contact with the world, from not keeping up with robot-body fashions, from not knowing what the score was. He'd imagined how it would be and he'd got it all worked out and when it came down to it, it was nothing like he thought.

Now he'd have to go back to the hole he'd cut in the fence and retrieve the clothing he had thrown away and hunt up a hiding place until he could think of something else.

Beyond the corner of the warehouse he heard the harsh, dull grate of metal, and he took another look.

The robots had broken up their line and were streaming back toward the warehouse and a dozen or so of them were wheeling the ramp away from the cargo port. Three humans, all dressed in uniform, were walking toward the ship, heading for the ladder, and one of them carried a batch of papers in his hand.

The loading was all done and the ship about to lift and here he was, not more than a thousand feet away, and all that he could do was stand and see it go.

There had to be a way, he told himself, to get in that ship. If he could only do it his troubles would be over—or at least the first of his troubles would be over.

Suddenly it struck him like a hand across the face. There was a way to do it! He'd stood here, blubbering, when all the time there had been a way to do it!

In the ship, he'd thought. And that was not necessary. He didn't have to be *in* the ship.

He started running, out into the darkness, far out so he could circle round and come upon the ship from the other side, so that the ship would be between him and the flood lights on the warehouse. He hoped that there was time.

He thudded out across the port, running in an arc, and came up to the ship and there was no sign as yet that it was about to leave.

Frantically he dug into his attachments bag and found the things he needed—the last things in that bag he'd ever thought he'd need. He found the suction discs and put them on, one for each knee, one for each elbow, one for each sole and wrist.

He strapped the kit about his waist and clambered up one of the mighty fins, using the discs to pull himself awkwardly along. It was not easy. He had never used the discs and there was a trick to using them, the trick of getting one clamped down and then working

loose another so that he could climb.

But he had to do it. He had no choice but to do it.

He climbed the fin and there was the vast steel body of the craft rising far above him, like a metal wall climbing to the sky, broken by the narrow line of a row of anchor posts that ran lengthwise of the hull—and all that huge extent of metal painted by the faint, illusive shine of starlight that glittered in his eyes.

Foot by foot he worked his way up the metal wall. Like a humping caterpillar, he squirmed his way and with each foot he gained he was a bit more thankful.

Then he heard the faint beginning of a rumble and with the rumble came terror. His suction cups, he knew, might not long survive the booming vibration of the wakening rockets, certainly would not hold for a moment when the ship began to climb.

Six feet above him lay his only hope—the final anchor post in the long row of anchor posts.

Savagely he drove himself up the barrel of the shuddering craft, hugging the steely surface like a desperate fly.

The rumble of the tubes built up to blot out all the world and he climbed in a haze of almost prayerful, brittle hope. He reached that anchor post or he was as good as dead. Should he slip and drop into that pit of flaming gases beneath the rocket mouths and he was done for.

Once a cup came loose and he almost fell, but the others held and he caught himself.

With a desperate, almost careless lunge, he hurled himself up the wall of metal and caught the rung in his fingertips and held on with a concentration of effort that wiped out all else.

The rumble was a screaming fury now that lanced through brain and body. Then the screaming ended and became a throaty roar of power and the vibration left the ship entirely. From one corner of his eye he saw the lights of the spaceport swinging over gently on their side.

Carefully, slowly, he pulled himself along the steel until he had a better grip upon the rung, but even with the better grip he had the feeling that some great hand had him in its fist and was swinging him in anger in a hundred-mile-long arc.

Then the tubes left off their howling and there was a terrible silence and the stars were there, up above him and to either side of him, and they were steely stars with no twinkle in them. Down below, he knew, a lonely Earth was swinging, but he could not see it.

He pulled himself up against the rung and thrust a leg beneath it and sat up on the hull.

There were more stars than he'd

ever seen before, more than he'd dreamed there could be. They were still and cold, like hard points of light against a velvet curtain; there was no glitter and no twinkle in them and it was as if a million eyes were staring down at him. The Sun was underneath the ship and over to one side; just at the edge of the left-hand curvature was the glare of it against the silent metal, a sliver of reflected light outlining one edge of the ship. The Earth was far astern, a ghostly blue-green ball hanging in the void, ringed by the fleecy halo of its atmosphere.

It was as if he were detached, a lonely, floating brain that looked out upon a thing it could not understand, nor could ever try to understand; as if he might even be afraid of understanding it—a thing of mystery and delight so long as he retained an ignorance of it, but something fearsome and altogether overpowering once the ignorance had gone.

Richard Daniel sat there, flat upon his bottom, on the metal hull of the speeding ship and he felt the mystery and delight and the loneliness and the cold and the great uncaring and his mind retreated into a small and huddled, compact defensive ball.

He looked. That was all there was to do. It was all right now, he thought. But how long would he have to look at it? How long would he have to camp out here in the open—the most deadly kind of open?

He realized for the first time that he had no idea where the ship was going or how long it might take to get there. He knew it was a starship, which meant that it was bound beyond the solar system, and that meant that at some point in its flight it would enter hyperspace. He wondered, at first academically, and then with a twinge of fear, what hyperspace might do to one sitting naked to it. But there was little need, he thought philosophically, to fret about it now, for in due time he'd know, and there was not a thing that he could do about it—not a single thing.

He took the suction cups off his body and stowed them in his kit and then with one hand he tied the kit to one of the metal rungs and dug around in it until he found a short length of steel cable with a ring on one end and a snap on the other. He passed the ring end underneath a rung and threaded the snap end through it and snapped the snap onto a metal loop underneath his armpit. Now he was secured; he need not fear carelessly letting go and floating off the ship.

So here he was, he thought, neat as anything, going places fast, even if he had no idea where he might be headed, and now the only thing he needed was patience. He thought back, without

much point, to what the religico had said in the study back on Earth. Patience and humility and prayer, he'd said, apparently not realizing at the moment that a robot has a world of patience.

It would take a lot of time, Richard Daniel knew, to get where he was going. But he had a lot of time, a lot more than any human, and he could afford to waste it. There were no urgencies, he thought—no need of food or air or water, no need of sleep or rest. There was nothing that could touch him.

Although, come to think of it, there might be.

There was the cold, for one. The space-hull was still fairly warm, with one side of it picking up the heat of the Sun and radiating it around the metal skin, where it was lost on the other side, but there would be a time when the Sun would dwindle until it had no heat and then he'd be subjected to the utter cold of space.

And what would the cold do to him. Might it make his body brittle? Might it interfere with the functioning of his brain? Might it do other things he could not even guess?

He felt the fears creep in again and tried to shrug them off and they drew off, but they still were there, lurking at the fringes of his mind.

The cold, and the loneliness, he thought—but he was one who could cope with loneliness. And if he couldn't, if he got too lonely, if he could no longer stand it, he could always beat a devil's tattoo on the hull and after a time of that someone would come out to investigate and they would haul him in.

But that was the last move of desperation, he told himself. For if they came out and found him, then he would be caught. Should he be forced to that extremity, he'd have lost everything—there would then have been no point in leaving Earth at all.

So he settled down, living out his time, keeping the creeping fears at bay just beyond the outposts of his mind, and looking at the universe all spread out before him.

The motors started up again with a pale blue flickering in the rockets at the stern and although there was no sense of acceleration he knew that the ship, now well off the Earth, had settled down to the long, hard drive to reach the speed of light.

Once they reached that speed they would enter hyperspace. He tried not to think of it, tried to tell himself there was not a thing to fear—but it hung there just ahead of him, the great unknowable.

The Sun shrank until it was only one of many stars and there came a time when he could no

longer pick it out. And the cold clamped down but it didn't seem to bother him, although he could sense the coldness.

Maybe, he said in answer to his fear, that would be the way it would be with hyperspace as well. But he said it unconvincingly. The ship drove on and on with the weird blueness in the tubes.

Then there was the instant when his mind went splattering across the universe.

He was aware of the ship, but only aware of it in relation to an awareness of much else, and it was no anchor point, no rallying position. He was spread and scattered; he was opened out and rolled out until he was very thin. He was a dozen places, perhaps a hundred places, all at once, and it was confusing, and his immediate reaction was to fight back somehow against whatever might have happened to him—to fight back and pull himself together. The fighting did no good at all, but made it even worse, for in certain instances it seemed to drive parts of him farther from other parts of him and the confusion was made greater.

So he quit his fighting and his struggling and just lay there, scattered, and let the panic ebb away and told himself he didn't care, and wondered if he did.

Slow reason returned a dribble at a time and he could think again and he wondered rather bleakly if this could be hyperspace and was pretty sure it was. And if it were, he knew, he'd have a long time to live like this, a long time in which to become accustomed to it and to orient himself, a long time to find himself and pull himself together, a long time to understand this situation if it were, in fact, understandable.

So he lay, not caring greatly, with no fear or wonder, just resting and letting a fact seep into him here and there from many different points.

He knew that, somehow, his body—that part of him which housed the rest of him—was still chained securely to the ship, and that knowledge, in itself, he knew, was the first small step towards reorienting himself. He had to reorient, he knew. He had to come to some sort of terms, if not to understanding, with this situation.

He had opened up and he had scattered out—that essential part of him, the feeling and the knowing and the thinking part of him, and he lay thin across a universe that loomed immense in unreality.

Was this, he wondered, the way the universe should be, or was it the unchained universe, the wild universe beyond the limiting disciplines of measured space and time.

He started slowly reaching out, cautious as he had been in his crawling on the surface of the

distant parts of him, a little at a time. He did not know how he did it, he was conscious of no particular technique, but whatever he was doing, it seemed to work, for he pulled himself together, bit by knowing bit, until he had gathered up all the scattered fragments of him into several different piles.

Then he quit and lay there, wherever there might be, and tried to sneak up on those piles of understanding that he took to be himself.

It took a while to get the hang of it, but once he did, some of the incomprehensibility went away, although the strangeness stayed. He tried to put it into thought and it was hard to do. The closest he could come was that he had been unchained as well as the universe—that whatever bondage had been imposed upon him by that chained and normal world had now become dissolved and he no longer was fenced in by either time or space.

He could see—and know and sense — across vast distances, if distance were the proper term, and he could understand certain facts that he had not even thought about before, could understand instinctively, but without the language or the skill to coalesce the facts into independent data.

Once again the universe was spread far out before him and it was a different and in some ways a better universe, a more diagrammatic universe, and in time, he knew, if there were such a thing as time, he'd gain some completer understanding and acceptance of it.

He probed and sensed and learned and there was no such thing as time, but a great foreverness.

He thought with pity of those others locked inside the ship, safe behind its insulating walls, never knowing all the glories of the innards of a star or the vast panoramic sweep of vision and of knowing far above the flat galactic plane.

Yet he really did not know what he saw or probed; he merely sensed and felt it and became a part of it, and it became a part of him—he seemed unable to reduce it to a formal outline of fact or of dimension or of content. It still remained a knowledge and a power so overwhelming that it was nebulous. There was no fear and no wonder, for in this place, it seemed, there was neither fear nor wonder. And he finally knew that it was a place apart, a world in which the normal space-time knowledge and emotion had no place at all and a normal space-time being could have no tools or measuring stick by which he might reduce it to a frame of reference.

There was no time, no space, no fear, no wonder—and no actual knowledge, either.

Then time came once again and suddenly his mind was stuffed back into its cage within his metal skull and he was again one with his body, trapped and chained and small and cold and naked.

He saw that the stars were different and that he was far from home and just a little way ahead was a star that blazed like a molten furnace hanging in the black.

He sat bereft, a small thing once again, and the universe reduced to package size.

Practically, he checked the cable that held him to the ship and it was intact. His attachments kit was still tied to its rung. Everything was exactly as it had been before.

He tried to recall the glories he had seen, tried to grasp again the fringe of knowledge which he had been so close to, but both the glory and the knowledge, if there had ever been a knowledge, had faded into nothingness.

He felt like weeping, but he could not weep, and he was too old to lie down upon the ship and kick his heels in tantrum.

So he sat there, looking at the sun that they were approaching and finally there was a planet that he knew must be their destination, and he found room to wonder what planet it might be and how far from Earth it was.

He heated up a little as the ship skipped through atmosphere as an aid to braking speed and he had some rather awful moments as it spiraled into thick and soupy gases that certainly were a far cry from the atmosphere of Earth. He hung most desperately to the rungs as the craft came mushing down onto a landing field, with the hot gases of the rockets curling up about him. But he made it safely and swiftly clambered down and darted off into the smog-like atmosphere before anyone could see him.

Safely off, he turned and looked back at the ship and despite its outlines being hidden by the drifting clouds of swirling gases, he could see it clearly, not as an actual structure, but as a diagram. He looked at it wonderingly and there was something wrong with the diagram, something vaguely wrong, some part of it that was out of whack and not the way it should be.

He heard the clanking of cargo haulers coming out upon the field and he wasted no more time, diagram or not.

He drifted back, deeper in the mists, and began to circle, keeping a good distance from the ship. Finally he came to the spaceport's edge and the beginning of the town.

He found a street and walked down it leisurely and there was a wrongness in the town.

He met a few hurrying robots

who were in too much of a rush to pass the time of day. But he met no humans.

And that, he knew quite suddenly, was the wrongness of the place. It was not a human town.

There were no distinctly human buildings—no stores or residences, no churches and no restaurants. There were gaunt shelter barracks and sheds for the storing of equipment and machines, great sprawling warehouses and vast industrial plants. But that was all there was. It was a bare and dismal place compared to the streets that he had known on Earth.

It was a robot town, he knew. And a robot planet. A world that was barred to humans, a place where humans could not live, but so rich in some natural resource that it cried for exploitation. And the answer to that exploitation was to let the robots do it.

Luck, he told himself. His good luck still was holding. He had literally been dumped into a place where he could live without human interference. Here, in this planet, he would be with his own.

If that was what he wanted. And he wondered if it was. He wondered just exactly what it was he wanted, for he'd had no time to think of what he wanted. He had been too intent on fleeing Earth to think too much about it. He had known all along what he was running from, but had not considered what he might be running to.

He walked a little further and the town came to an end. The street became a path and went wondering on into the wind-blown fogginess.

So he turned around and went back up the street.

There had been one barracks, he remembered, that had a TRANSIENTS sign hung out, and he made his way to it.

Inside, an ancient robot sat behind the desk. His body was old-fashioned and somehow familiar. And it was familiar, Richard Daniel knew, because it was as old and battered and as out-of-date as his.

He looked at the body, just a bit aghast, and saw that while it resembled his, there were little differences. The same ancient model, certainly, but a different series. Possibly a little newer, by twenty years or so, than his.

"Good evening, stranger," said the ancient robot. "You came in on the ship?"

Richard Daniel nodded.

"You'll be staying till the next one?"

"I may be settling down," said Richard Daniel. "I may want to stay here."

The ancient robot took a key from off a hook and laid it on the desk.

"You representing someone?"

"No," said Richard Daniel.

"I thought maybe that you were. We get a lot of representatives. Humans can't come here, or don't want to come, so they send for them."

"You have a lot of visitors?"

"Some. Mostly the representatives I was telling you about. But there are some that are on the lam. I'd take it, mister, you are on the lam."

Richard Daniel didn't answer.

"It's all right," the ancient one assured him. "We don't mind at all, just so you behave yourself. Some of our most prominent citizens, they came here on the lam."

"That is fine," said Richard Daniel. "And how about yourself? You must be on the lam as well."

"You mean this body. Well, that's a little different. This here is punishment."

"Punishment?"

"Well, you see, I was the foreman of the cargo warehouse and I got to goofing off. So they hauled me up and had a trial and they found me guilty. Then they stuck me into this old body and I have to stay in it, at this lousy job, until they get another criminal that needs punishment. They can't punish no more than one criminal at a time because this is the only old body that they have. Funny thing about this body. One of the boys went back to Earth on a business trip and found this old heap of metal in a junkyard and brought it home with him—for a joke, I guess. Like a human might buy a skeleton for a joke, you know."

He took a long, sly look at Richard Daniel. "It looks to me, stranger, as if your body . . ."

But Richard Daniel didn't let him finish.

"I take it," Richard Daniel said, "you haven't many criminals."

"No," said the ancient robot sadly, "we're generally a pretty solid lot."

Richard Daniel reached out to pick up the key, but the ancient robot put out his hand and covered it.

"Since you are on the lam," he said, "it'll be payment in advance."

"I'll pay you for a week," said Richard Daniel, handing him some money.

The robot gave him back his change.

"One thing I forgot to tell you. You'll have to get plasticated."

"Plasticated?"

"That's right. Get plastic squirted over you. To protect you from the atmosphere. It plays hell with metal. There's a place next door will do it."

"Thanks. I'll get it done immediately."

"It wears off," warned the ancient one. "You have to get a new job every week or so."

Richard Daniel took the key and went down the corridor until

he found his numbered cubicle. He unlocked the door and stepped inside. The room was small, but clean. It had a desk and chair and that was all it had.

He stowed his attachments bag in one corner and sat down in the chair and tried to feel at home. But he couldn't feel at home, and that was a funny thing—he'd just rented himself a home.

He sat there, thinking back, and tried to whip up some sense of triumph at having done so well in covering his tracks. He couldn't.

Maybe this wasn't the place for him, he thought. Maybe he'd be happier on some other planet. Perhaps he should go back to the ship and get on it once again and have a look at the next planet coming up.

If he hurried, he might make it. But he'd have to hurry, for the ship wouldn't stay longer than it took to unload the consignment for this place and take on new cargo.

He got up from the chair, still only half decided.

And suddenly he remembered how, standing in the swirling mistiness, he had seen the ship as a diagram rather than a ship, and as he thought about it, something clicked inside his brain and he leaped toward the door.

For now he knew what had been wrong with the spaceship's diagram — an injector valve was somehow out of kilter; he had to get back there before the ship took off again.

He went through the door and down the corridor. He caught sight of the ancient robot's startled face as he ran across the lobby and out into the street. Pounding steadily toward the spaceport, he tried to get the diagram into his mind again, but it would not come complete—it came in bits and pieces, but not all of it.

And even as he fought for the entire diagram, he heard the beginning take-off rumble.

"Wait!" he yelled. "Wait for me! You can't . . ."

There was a flash that turned the world pure white and a mighty invisible wave came swishing out of nowhere and sent him reeling down the street, falling as he reeled. He was skidding on the cobblestones and sparks were flying as his metal scraped along the stone. The whiteness reached a brilliance that almost blinded him and then it faded swiftly and the world was dark.

He brought up against a wall of some sort, clanging as he hit, and he lay there, blind from the brilliance of the flash, while his mind went scurrying down the trail of the diagram.

The diagram, he thought—why should he have seen a diagram of the ship he'd ridden through space, a diagram that had shown an injector out of whack? And how could he, of all

robots, recognize an injector, let alone know there was something wrong with it. It had been a joke back home, among the Barringtons, that he, a mechanical thing himself, should have no aptitude at all for mechanical contraptions. And he could have saved those people and the ship—he could have saved them all if he'd immediately recognized the significance of the diagram. But he'd been too slow and stupid and now they all were dead.

The darkness had receded from his eyes and he could see again and he got slowly to his feet, feeling himself all over to see how badly he was hurt. Except for a dent or two, he seemed to be all right.

There were robots running in the street, heading for the spaceport, where a dozen fires were burning and where sheds and other structures had been flattened by the blast.

Someone tugged at his elbow and he turned around. It was the ancient robot.

"You're the lucky one," the ancient robot said. "You got off it just in time."

Richard Daniel nodded dumbly and had a terrible thought: What if they should think he did it? He had gotten off the ship; he had admitted that he was on the lam; he had rushed out suddenly, just a few seconds before the ship exploded. It would be easy to put it all together—that he had sabotaged the ship, then at the last instant had rushed out, remorseful, to undo what he had done. On the face of it, it was damning evidence.

But it was all right as yet, Richard Daniel told himself. For the ancient robot was the only one that knew—he was the only one he'd talked to, the only one who even knew that he was in town.

There was a way, Richard Daniel thought—there was an easy way. He pushed the thought away, but it came back. You are your own, it said. You are already beyond the law. In rejecting human law, you made yourself an outlaw. You have become fair prey. There is just one law for you—self preservation.

But there are robot laws, Richard Daniel argued. There are laws and courts in this community. There is a place for justice.

Community law, said the leech clinging in his brain, provincial law, little more than tribal law—and the stranger's always wrong.

Richard Daniel felt the coldness of the fear closing down upon him and he knew, without half thinking, that the leech was right.

He turned around and started down the street, heading for the transients barracks. Something unseen in the street caught his foot and he stumbled and went down. He scrabbled to his knees,

hunting in the darkness on the cobblestones for the thing that tripped him. It was a heavy bar of steel, some part of the wreckage that had been hurled this far. He gripped it by one end and arose.

"Sorry," said the ancient robot. "You have to watch your step."

And there was a faint implication in his words, a hint of something more than the words had said, a hint of secret gloating in a secret knowledge.

You have broken other laws, said the leech in Richard Daniel's brain. What of breaking just one more? Why, if necessary, not break a hundred more. It is all or nothing. Having come this far, you can't afford to fail. You can allow no one to stand in your way now.

The ancient robot half turned away and Richard Daniel lifted up the bar of steel, when suddenly the ancient robot no longer was a robot, but a diagram. There, with all the details of a blueprint, were all the working parts, all the mechanism of the robot that walked in the street before him. And if one detached that single bit of wire, if one burned out that coil, if—

Even as he thought it, the diagram went away and there was the robot, a stumbling, falling robot that clanged on the cobblestones.

Richard Daniel swung around in terror, looking up the street, but there was no one near.

He turned back to the fallen robot and quietly knelt beside him. He gently put the bar of steel down into the street. And he felt a thankfulness—for, almost miraculously, he had not killed.

The robot on the cobblestones was motionless. When Richard Daniel lifted him, he dangled. And yet he was all right. All anyone had to do to bring him back to life was to repair whatever damage had been done his body. And that served the purpose, Richard Daniel told himself, as well as killing would have done.

He stood with the robot in his arms, looking for a place to hide him. He spied an alley between two buildings and darted into it. One of the buildings, he saw, was set upon stone blocks sunk into the ground, leaving a clearance of a foot or so. He knelt and shoved the robot underneath the building. Then he stood up and brushed the dirt and dust from his body.

Back at the barracks and in his cubicle, he found a rag and cleaned up the dirt that he had missed. And, he thought hard.

He'd seen the ship as a diagram and, not knowing what it meant, hadn't done a thing. Just now he'd seen the ancient robot as a diagram and had most decisively and neatly used that diagram to save himself from murder — from the murder that he was fully ready to commit.

But how had he done it? And the answer seemed to be that he really had done nothing. He'd simply thought that one should detach a single wire, burn out a single coil—he'd thought it and it was done.

Perhaps he'd seen no diagram at all. Perhaps the diagram was no more than some sort of psychic rationalization to mask whatever he had seen or sensed. Seeing the ship and robot with the surfaces stripped away from them and their purpose and their function revealed fully to his view, he had sought some explanation of his strange ability, and his subconscious mind had devised an explanation, an anology that, for the moment, had served to satisfy him.

Like when he'd been in hyperspace, he thought. He'd seen a lot of things out there he had not understood. And that was it, of course, he thought excitedly. Something had happened to him out in hyperspace. Perhaps there'd been something that had stretched his mind. Perhaps he'd picked up some sort of new dimension-seeing, some new twist to his mind.

He remembered how, back on the ship again, with his mind wiped clean of all the glory and the knowledge, he had felt like weeping. But now he knew that it had been much too soon for weeping. For although the glory and the knowledge (if there'd been a knowledge) had been lost to him, he had not lost everything. He'd gained a new perceptive device and the ability to use it somewhat fumblingly—and it didn't really matter that he still was at a loss as to what he did to use it. The basic fact that he possessed it and could use it was enough to start with.

Somewhere out in front there was someone calling—someone, he now realized, who had been calling for some little time. . . .

"Hubert, where are you? Hubert, are you around?? Hubert . . ."

Hubert?

Could Hubert be the ancient robot? Could they have missed him already?

Richard Daniel jumped to his feet for an undecided moment, listening to the calling voice. And then sat down again. Let them call, he told himself. Let them go out and hunt. He was safe in this cubicle. He had rented it and for the moment it was home and there was no one who would dare break in upon him.

But it wasn't home. No matter how hard he tried to tell himself it was, it wasn't. There wasn't any home.

Earth was home, he thought. And not all of Earth, but just a certain street and that one part of it was barred to him forever. It had been barred to him by the dying of a sweet old lady who had

outlived her time; it had been barred to him by his running from it.

He did not belong on this planet, he admitted to himself, nor on any other planet. He belonged on Earth, with the Barringtons, and it was impossible for him to be there.

Perhaps, he thought, he should have stayed and let them reorient him. He remembered what the lawyer had said about memories that could become a burden and a torment. After all, it might have been wiser to have started over once again.

For what kind of future did he have, with his old out-dated body, his old out-dated brain? The kind of body that they put a robot into on this planet by way of punishment. And the kind of brain—but the brain was different, for he had something now that made up for any lack of more modern mental tools.

He sat and listened, and he heard the house—calling all across the light years of space for him to come back to it again. And he saw the faded living room with all its vanished glory that made a record of the years. He remembered, with a twinge of hurt, the little room back of the kitchen that had been his very own.

He arose and paced up and down the cubicle — three steps and turn, and then three more steps and turn for another three.

The sights and sounds and smells of home grew close and wrapped themselves about him and he wondered wildly if he might not have the power, a power accorded him by the universe of hyperspace, to will himself to that familiar street again.

He shuddered at the thought of it, afraid of another power, afraid that it might happen. Afraid of himself, perhaps, of the snarled and tangled being that he was—no longer the faithful, shining servant, but a sort of mad thing that rode outside a spaceship, that was ready to kill another being, that could face up to the appalling sweep of hyperspace, yet cowered before the impact of a memory.

What he needed was a walk, he thought. Look over the town and maybe go out into the country. Besides, he remembered, trying to become practical, he'd need to get that plastication job he had been warned to get.

He went out into the corridor and strode briskly down it and was crossing the lobby when someone spoke to him.

"Hubert," said the voice, "just where have you been. I've been waiting hours for you."

Richard Daniel spun around and a robot sat behind the desk. There was another robot leaning in a corner and there was a naked robot brain lying on the desk.

"You are Hubert, aren't you?"

asked the one behind the desk.

Richard Daniel opened up his mouth to speak, but the words refused to come.

"I thought so," said the robot. "You may not recognize me, but my name is Andy. The regular man was busy, so the judge sent me. He thought it was only fair we make the switch as quickly as possible. He said you'd served a longer term than you really should. Figures you'd be glad to know they'd convicted someone else."

Richard Daniel stared in horror at the naked brain lying on the desk.

The robot gestured at the metal body propped into the corner.

"Better than when we took you out of it," he said with a throaty chuckle. "Fixed it up and polished it and got out all the dents. Even modernized it some. Brought it strictly up to date. You'll have a better body than you had when they stuck you into that monstrosity."

"I don't know what to say," said Richard Daniel, stammering. "You see, I'm not . . ."

"Oh, that's all right," said the other happily. "No need for gratitude. Your sentence worked out longer than the judge expected. This just makes up for it."

"I thank you, then," said Richard Daniel. "I thank you very much."

And was astounded at himself, astonished at the ease with which he said it, confounded at his sly duplicity.

But if they forced it on him, why should be refuse? There was nothing that he needed more than a modern body!

It was still working out, he told himself. He was still riding luck. For this was the last thing that he needed to cover up his tracks.

"All newly plasticated and everything," said Andy. "Hans did an extra special job."

"Well, then," said Richard Daniel, "let's get on with it."

The other robot grinned. "I don't blame you for being anxious to get out of there. It must be pretty terrible to live in a pile of junk like that."

He came around from behind the desk and advanced on Richard Daniel.

"Over in the corner," he said, "and kind of prop yourself. I don't want you tipping over when I disconnect you. One good fall and that body'd come apart."

"All right," said Richard Daniel. He went into the corner and leaned back against it and planted his feet solid so that he was propped.

He had a rather awful moment when Andy disconnected the optic nerve and he lost his eyes and there was considerable queasiness in having his skull lifted off his shoulders and he was in sheer funk as the final disconnections were being swiftly made.

Then he was a blob of greyness without a body or a head or eyes or anything at all. He was no more than a bundle of thoughts all wrapped around themselves like a pail of worms and this pail of worms was suspended in pure nothingness.

Fear came to him, a taunting, terrible fear. What if this were just a sort of ghastly gag? What if they'd found out who he really was and what he'd done to Hubert? What if they took his brain and tucked it away somewhere for a year or two—or for a hundred years? It might be, he told himself, nothing more than their simple way of justice.

He hung onto himself and tried to fight the fear away, but the fear ebbed back and forth like a restless tide.

Time stretched out and out—far too long a time, far more time than one would need to switch a brain from one body to another. Although, he told himself, that might not be true at all. For in his present state he had no way in which to measure time. He had no external reference points by which to determine time.

Then suddenly he had eyes.

And he knew everything was all right.

One by one his senses were restored to him and he was back inside a body and he felt awkward in the body, for he was unaccustomed to it.

The first thing that he saw was his old and battered body propped into its corner and he felt a sharp regret at the sight of it and it seemed to him that he had played a dirty trick upon it. It deserved, he told himself, a better fate than this—a better fate than being left behind to serve as a shabby jailhouse on this outlandish planet. It had served him well for six hundred years and he should not be deserting it. But he was deserting it. He was, he told himself in contempt, becoming very expert at deserting his old friends. First the house back home and now his faithful body.

Then he remembered something else—all that money in the body!

"What's the matter, Hubert?" Andy asked.

He couldn't leave it there, Richard Daniel told himself, for he needed it. And besides, if he left it there, someone would surely find it later and it would be a give-away. He couldn't leave it there and it might not be safe to forthrightly claim it. If he did, this other robot, this Andy, would think he'd been stealing on the job or running some side racket. He might try to bribe the other, but one could never tell how a move like that might go. Andy might be full of righteousness and then there'd be hell to pay. And, besides, he didn't want to part with any of the money.

All at once he had it—he knew just what to do. And even as he thought it, he made Andy into a diagram.

That connection there, thought Richard Daniel, reaching out his arm to catch the falling diagram that turned into a robot. He eased it to the floor and sprang across the room to the side of his old body. In seconds he had the chest safe open and the money safely out of it and locked inside his present body.

Then he made the robot on the floor become a diagram again and got the connection back the way that it should be.

Andy rose shakily off the floor. He looked at Richard Daniel in some consternation.

"What happened to me?" he asked in a frightened voice.

Richard Daniel sadly shook his head. "I don't know. You just keeled over. I started for the door to yell for help, then I heard you stirring and you were all right."

Andy was plainly puzzled. "Nothing like this ever happened to me before," he said.

"If I were you," counseled Richard Daniel, "I'd have myself checked over. You must have a faulty relay or a loose connection."

"I guess I will," the other one agreed. "It's downright dangerous."

He walked slowly to the desk and picked up the other brain, started with it toward the battered body leaning in the corner.

Then he stopped and said: "Look, I forgot. I was supposed to tell you. You better get up to the warehouse. Another ship is on its way. It will be coming in any minute now."

"Another one so soon?"

"You know how it goes," Andy said, disgusted. "They don't even try to keep a schedule here. We won't see one for months and then there'll be two or three at once."

"Well, thanks," said Richard Daniel, going out the door.

He went swinging down the street with a new-born confidence. And he had a feeling that there was nothing that could lick him, nothing that could stop him.

For he was a lucky robot!

Could all that luck, he wondered, have been gotten out in hyperspace, as his diagram ability, or whatever one might call it, had come from hyperspace? Somehow hyperspace had taken him and twisted him and changed him, had molded him anew, had made him into a different robot than he had been before.

Although, so far as luck was concerned, he had been lucky all his entire life. He'd had good luck with his human family and had gained a lot of favors and a high position and had been allowed to live for six hundred years. And that was a thing that never should have happened. No

matter how powerful or influential the Barringtons had been, that six hundred years must be due in part to nothing but sheer luck.

In any case, the luck and the diagram ability gave him a solid edge over all the other robots he might meet. Could it, he asked himself, give him an edge on Man as well? *No*—that was a thought he should not think, for it was blasphemous. There never was a robot that would be the equal of a man.

But the thought kept on intruding and he felt not nearly so contrite over this leaning toward ward bad taste, or poor judgment, whichever it might be, as it seemed to him he should feel.

As he neared the spaceport, he began meeting other robots and some of them saluted him and called him by the name of Hubert and others stopped and shook him by the hand and told him they were glad that he was out of pokey.

This friendliness shook his confidence. He began to wonder if his luck would hold, for some of the robots, he was certain, thought it rather odd that he did not speak to them by name, and there had been a couple of remarks that he had some trouble fielding. He had a feeling that when he reached the warehouse he might be sunk without a trace, for he would know none of the robots there and he had not the least idea what his duties might include. And, come to think of it, he didn't even know where the warehouse was.

He felt the panic building in him and took a quick, involuntary look around, seeking some method of escape. For it became quite apparent to him that he must never reach the warehouse.

He was trapped, he knew, and he couldn't keep on floating, trusting to his luck. In the next few minutes he'd have to figure something.

He started to swing over into a side street, not knowing what he meant to do, but knowing he must do something, when he heard the mutter far above him and glanced up quickly to see the crimson glow of belching rocket tubes shimmering through the clouds.

He swung around again and sprinted desperately for the spaceport and reached it as the ship came chugging down to a steady landing. It was, he saw, an old ship. It had no burnish to it and it was blunt and squat and wore a hangdog look.

A tramp, he told himself, that knocked about from port to port, picking up whatever cargo it could, with perhaps now and then a paying passenger headed for some backwater planet where there was no scheduled service.

He waited as the cargo port came open and the ramp came down and then marched pur-

posefully out onto the field, ahead of the straggling cargo crew, trudging toward the ship. He had to act, he knew, as if he had a perfect right to walk into the ship as if he knew exactly what he might be doing. If there were a challenge he would pretend he didn't hear it and simply keep on going.

He walked swiftly up the ramp, holding back from running, and plunged through the accordion curtain that served as an atmosphere control. His feet rang across the metal plating of the cargo hold until he reached the catwalk and plunged down it to another cargo level.

At the bottom of the catwalk he stopped and stood tense, listening. Above him he heard the clang of a metal door and the sound of footsteps coming down the walk to the level just above him. That would be the purser or the first mate, he told himself, or perhaps the captain, coming down to arrange for the discharge of the cargo.

Quietly he moved away and found a corner where he could crouch and hide.

Above his head he heard the cargo gang at work, talking back and forth, then the screech of crating and the thump of bales and boxes being hauled out to the ramp.

Hours passed, or they seemed like hours, as he huddled there. He heard the cargo gang bringing something down from one of the upper levels and he made a sort of prayer that they'd not come down to this lower level—and he hoped no one would remember seeing him come in ahead of them, or if they did remember, that they would assume that he'd gone out again.

Finally it was over, with the footsteps gone. Then came the pounding of the ramp as it shipped itself and the banging of the port.

He waited for long minutes, waiting for the roar that, when it came, set his head to ringing, waiting for the monstrous vibration that shook and lifted up the ship and flung it off the planet.

Then quiet came and he knew the ship was out of atmosphere and once more on its way.

And knew he had it made.

For now he was no more than a simple stowaway. He was no longer Richard Daniel, runaway from Earth. He'd dodged all the traps of Man, he'd covered all his tracks, and he was on his way.

But far down underneath he had a jumpy feeling, for it all had gone too smoothly, more smoothly than it should.

He tried to analyze himself, tried to pull himself in focus, tried to assess himself for what he had become.

He had abilities that Man had never won or developed or

achieved, whichever it might be. He was a certain step ahead of not only other robots, but of Man as well. He had a thing, or the beginning of a thing, that Man had sought and studied and had tried to grasp for centuries and had failed.

A solemn and a deadly thought: was it possible that it was the robots, after all, for whom this great heritage had been meant? Would it be the robots who would achieve the paranormal powers that Man had sought so long, while Man, perforce, must remain content with the materialistic and the merely scientific? Was he, Richard Daniel, perhaps, only the first of many? Or was it all explained by no more than the fact that he alone had been exposed to hyperspace? Could this ability of his belong to anyone who would subject himself to the full, uninsulated mysteries of that mad universe unconstrained by time? Could Man have this, and more, if he too should expose himself to the utter randomness of unreality?

He huddled in his corner, with the thought and speculation stirring in his mind and he sought the answers, but there was no solid answer.

His mind went reaching out, almost on its own, and there was a diagram inside his brain, a portion of a blueprint, and bit by bit was added to it until it all was there, until the entire ship on which he rode was there, laid out for him to see.

He took his time and went over the diagram resting in his brain and he found little things—a fitting that was working loose and he tightened it, a printed circuit that was breaking down and getting mushy and he strengthened it and sharpened it and made it almost new, a pump that was leaking just a bit and he stopped its leaking.

Some hundreds of hours later one of the crewmen found him and took him to the captain.

The captain glowered at him.

"Who are you?" he asked.

"A stowaway," Richard Daniel told him.

"Your name," said the captain, drawing a sheet of paper before him and picking up a pencil, "your planet of residence and owner."

"I refuse to answer you," said Richard Daniel sharply and knew that the answer wasn't right, for it was not right and proper that a robot should refuse a human a direct command.

But the captain did not seem to mind. He laid down the pencil and stroked his black beard slyly.

"In that case," he said, "I can't exactly see how I can force the information from you. Although there might be some who'd try. You are very lucky that you

stowed away on a ship whose captain is a most kind-hearted man."

He didn't look kind-hearted. He did look foxy.

Richard Daniel stood there, saying nothing.

"Of course," the captain said, "there's a serial number somewhere on your body and another on your brain. But I suppose that you'd resist if we tried to look for them."

"I am afraid I would."

"In that case," said the captain, "I don't think for the moment we'll concern ourselves with them."

Richard Daniel still said nothing, for he realized that there was no need to. This crafty captain had it all worked out and he'd let it go at that.

"For a long time," said the captain, "my crew and I have been considering the acquiring of a robot, but it seems we never got around to it. For one thing, robots are expensive and our profits are not large."

He sighed and got up from his chair and looked Richard Daniel up and down.

"A splendid specimen," he said. "We welcome you aboard. You'll find us congenial."

"I am sure I will," said Richard Daniel. "I thank you for your courtesy."

"And now," the captain said, "you'll go up on the bridge and report to Mr. Duncan. I'll let him know you're coming. He'll find some light and pleasant duty for you."

Richard Daniel did not move as swiftly as he might, as sharply as the occasion might have called for, for all at once the captain had become a complex diagram. Not like the diagrams of ships or robots, but a diagram of strange symbols, some of which Richard Daniel knew were frankly chemical, but others which were not.

"You heard me!" snapped the captain. "Move!"

"Yes, sir," said Richard Daniel, willing the diagram away, making the captain come back again into his solid flesh.

Richard Daniel found the first mate on the bridge, a horse-faced, somber man with a streak of cruelty ill-hidden, and slumped in a chair to one side of the console was another of the crew, a sodden, terrible creature.

The sodden creature cackled. "Well, well, Duncan, the first non-human member of the *Rambler's* crew."

Duncan paid him no attention. He said to Richard Daniel: "I presume you are industrious and ambitious and would like to get along."

"Oh, yes," said Richard Daniel, and was surprised to find a new sensation—laughter—rising in himself.

"Well, then," said Duncan,

"report to the engine room. They have work for you. When you have finished there, I'll find something else."

"Yes, sir," said Richard Daniel, turning on his heel.

"A minute," said the mate. "I must introduce you to our ship's physician, Dr. Abram Wells. You can be truly thankful you'll never stand in need of his services."

"Good day, Doctor," said Richard Daniel, most respectfully.

"I welcome you," said the doctor, pulling a bottle from his pocket. "I don't suppose you'll have a drink with me. Well, then, I'll drink to you."

Richard Daniel turned around and left. He went down to the engine room and was put to work at polishing and scrubbing and generally cleaning up. The place was in need of it. It had been years, apparently, since it had been cleaned or polished and it was about as dirty as an engine room can get — which is terrible dirty. After the engine room was done there were other places to be cleaned and furbished up and he spent endless hours at cleaning and in painting and shining up the ship. The work was of the dullest kind, but he didn't mind. It gave him time to think and wonder, time to get himself sorted out and to become acquainted with himself, to try to plan ahead.

He was surprised at some of the things he found in himself. Contempt, for one—contempt for the humans on this ship. It took a long time for him to become satisfied that it was contempt, for he'd never held a human in contempt before.

But these were different humans, not the kind he'd known. These were no Barringtons. Although it might be, he realized, that he felt contempt for them because he knew them thoroughly. Never before had he known a human as he knew these humans. For he saw them not so much as living animals as intricate patternings of symbols. He knew what they were made of and the inner urgings that served as motivations, for the patterning was not of their bodies only, but of their minds as well. He had a little trouble with the symbology of their minds, for it was so twisted and so interlocked and so utterly confusing that it was hard at first to read. But he finally got it figured out and there were times he wished he hadn't.

The ship stopped at many ports and Richard Daniel took charge of the loading and unloading, and he saw the planets, but was unimpressed. One was a nightmare of fiendish cold, with the very atmosphere turned to drifting snow. Another was a dripping, noisome jungle world, and still another was a bare expanse of broken, tumbled rock without a trace of

life beyond the crew of humans and their robots who manned the huddled station in this howling wilderness.

It was after this planet that Jenks, the cook, went screaming to his bunk, twisted up with pain—the victim of a suddenly inflamed vermiform appendix.

Dr. Wells came tottering in to look at him, with a half-filled bottle sagging the jacket of his pocket. And later stood before the captain, holding out two hands that trembled, and with terror in his eyes.

"But I cannot operate," he blubbered. "I cannot take the chance. I would kill the man!"

He did not need to operate. Jenks suddenly improved. The pain went away and he got up from his bunk and went back to the galley and Dr. Wells sat huddled in his chair, bottle gripped between his hands, crying like a baby.

Down in the cargo hold, Richard Daniel sat likewise huddled and aghast that he had dared to do it—not that he had been able to, but that he had dared, that he, a robot, should have taken on himself an act of interference, however merciful, with the body of a human.

Actually, the performance had not been too difficult. It was, in a certain way, no more difficult than the repairing of an engine or the untangling of a faulty circuit. No more difficult—just a little different. And he wondered what he'd done and how he'd gone about it, for he did not know. He held the technique in his mind, of that there was ample demonstration, but he could in no wise isolate or pinpoint the pure mechanics of it. It was like an instinct, he thought—unexplainable, but entirely workable.

But a robot had no instinct. In that much he was different from the human and the other animals. Might not, he asked himself, this strange ability of his be a sort of compensating factor given to the robot for his very lack of instinct? Might that be why the human race had failed in its search for paranormal powers? Might the instincts of the body be at certain odds with the instincts of the mind?

For he had the feeling that this ability of his was just a mere beginning, that it was the first emergence of a vast body of abilities which some day would be rounded out by robots. And what would that spell, he wondered, in that distant day when the robots held and used the full body of that knowledge? An adjunct to the glory of the human race, or equals of the human race, or superior to the human race—or, perhaps, a race apart?

And what was his role, he wondered. Was it meant that he should go out as a missionary, a

messiah, to carry to robots throughout the universe the message that he held? There must be some reason for his having learned this truth. It could not be meant that he would hold it as a personal belonging, as an asset all his own.

He got up from where he sat and moved slowly back to the ship's forward area, which now gleamed spotlessly from the work he'd done on it, and he felt a certain pride.

He wondered why he had felt that it might be wrong, blasphemous, somehow, to announce his abilities to the world? Why had he not told those here in the ship that it had been he who had healed the cook, or mentioned the many other little things he'd done to maintain the ship in perfect running order?

Was it because he did not need respect, as a human did so urgently? Did glory have no basic meaning for a robot? Or was it because he held the humans in this ship in such utter contempt that their respect had no value to him?

And this contempt—was it because these men were meaner than other humans he had known, or was it because he now was greater than any human being? Would he ever again be able to look on any human as he had looked upon the Barringtons?

He had a feeling that if this were true, he would be the poorer for it. Too suddenly, the whole universe was home and he was alone in it and as yet he'd struck no bargain with it or himself.

The bargain would come later. He need only bide his time and work out his plans and his would be a name that would be spoken when his brain was scaling flakes of rust. For he was the emancipator, the messiah of the robots; he was the one who had been called to lead them from the wilderness.

"You!" a voice cried.

Richard Daniel wheeled around and saw it was the captain.

"What do you mean, walking past me as if you didn't see me?" asked the captain fiercely.

"I am sorry," Richard Daniel told him.

"You snubbed me!" raged the captain.

"I was thinking," Richard Daniel said.

"I'll give you something to think about," the captain yelled. "I'll work you till your tail drags. I'll teach the likes of you to get uppity with me!"

"As you wish," said Richard Daniel.

For it didn't matter. It made no difference to him at all what the captain did or thought. And he wondered why the respect even of a robot should mean so much to a human like the captain, why he should guard his small position with so much zealousness.

"In another twenty hours," the captain said, "we hit another port."

"I know," said Richard Daniel. "Sleepy Hollow on Arcadia."

"All right, then," said the captain, "since you know so much, get down into the hold and get the cargo ready to unload. We been spending too much time in all these lousy ports loading and unloading. You been dogging it."

"Yes, sir," said Richard Daniel, turning back and heading for the hold.

He wondered faintly if he were still robot—or was he something else? Could a machine evolve, he wondered, as Man himself evolved? And if a machine evolved, whatever would it be? Not Man, of course, for it never could be that, but could it be machine?

He hauled out the cargo consigned to Sleepy Hollow and there was not too much of it. So little of it, perhaps, that none of the regular carriers would even consider its delivery, but dumped it off at the nearest terminal, leaving it for a roving tramp, like the *Rambler,* to carry eventually to its destination.

When they reached Arcadia, he waited until the thunder died and the ship was still. Then he shoved the lever that opened up the port and slid out the ramp.

The port came open ponderously and he saw blue skies and the green of trees and the far-off swirl of chimney smoke mounting in the sky.

He walked slowly forward until he stood upon the ramp and there lay Sleepy Hollow, a tiny, huddled village planted at the river's edge, with the forest as a background. The forest ran on every side to a horizon of climbing fielded hills. Fields lay near the village, yellow with maturing crops, and he could see a dog sleeping in the sun outside a cabin door.

A man was climbing up the ramp toward him and there were others running from the village.

"You have cargo for us?" asked the man.

"A small consignment," Richard Daniel told him. "You have something to put on?"

The man had a weatherbeaten look and he'd missed several haircuts and he had not shaved for days. His clothes were rough and sweat-stained and his hands were strong and awkward with hard work.

"A small shipment," said the man. "You'll have to wait until we bring it up. We had no warning you were coming. Our radio is broken.

"You go and get it," said Richard Daniel. "I'll start unloading."

He had the cargo half unloaded when the captain came storming down into the hold. What was going on, he yelled. How long would they have to

wait? "God knows we're losing money as it is even stopping at this place."

"That may be true," Richard Daniel agreed, "but you knew that when you took the cargo on. There'll be other cargoes and goodwill is something—"

"Goodwill be damned!" the captain roared. "How do I know I'll ever see this place again?"

Richard Daniel continued unloading cargo.

"You," the captain shouted, "go down to that village and tell them I'll wait no longer than an hour . . ."

"But this cargo, sir?"

"I'll get the crew at it. Now, jump!

So Richard Daniel left the cargo and went down into the village.

He went across the meadow that lay between the spaceport and the village, following the rutted wagon tracks, and it was a pleasant walk. He realized with surprise that this was the first time he'd been on solid ground since he'd left the robot planet. He wondered briefly what the name of that planet might have been, for he had never known. Nor what its importance was, why the robots might be there or what they might be doing. And he wondered, too, with a twinge of guilt, if they'd found Hubert yet.

And where might Earth be now? he asked himself. In what direction did it lie and how far away? Although it didn't really matter, for he was done with Earth.

He had fled from Earth and gained something in his fleeing. He had escaped all the traps of Earth and all the snares of Man. What he held was his, to do with as he pleased, for he was no man's robot, despite what the captain thought.

He walked across the meadow and saw that this planet was very much like Earth. It had the same soft feel about it, the same simplicity. It had far distances and there was a sense of freedom.

He came into the village and heard the muted gurgle of the river running and the distant shouts of children at their play and in one of the cabins a sick child was crying with lost helplessness.

He passed the cabin where the dog was sleeping and it came awake and stalked growling to the gate. When he passed it followed him, still growling, at a distance that was safe and sensible.

An autumnal calm lay upon the village, a sense of gold and lavender, and tranquillity hung in the silences between the crying of the baby and the shouting of the children.

There were women at the windows looking out at him and others at the doors and the dog still followed, but his growls had stilled and now he trotted with prick-eared curiosity.

Richard Daniel stopped in the street and looked around him and the dog sat down and watched him and it was almost as if time itself had stilled and the little village lay divorced from all the universe, an arrested microsecond, an encapsulated acreage that stood sharp in all its truth and purpose.

Standing there, he sensed the village and the people in it, almost as if he had summoned up a diagram of it, although if there were a diagram, he was not aware of it.

It seemed almost as if the village were the Earth, a transplanted Earth with the old primeval problems and hopes of Earth—a family of peoples that faced existence with a readiness and confidence and inner strength.

From down the street he heard the creak of wagons and saw them coming around the bend, three wagons piled high and heading for the ship.

He stood and waited for them and as he waited the dog edged a little closer and sat regarding him with a not-quite-friendliness.

The wagons came up to him and stopped.

"Pharmaceutical materials, mostly," said the man who sat atop the first load, "It is the only thing we have that is worth the shipping."

"You seem to have a lot of it," Richard Daniel told him.

The man shook his head. "It's not so much. It's almost three years since a ship's been here. We'll have to wait another three, or more perhaps, before we see another."

He spat down on the ground.

"Sometimes it seems," he said, "that we're at the tail-end of nowhere. There are times we wonder if there is a soul that remembers we are here."

From the direction of the ship, Richard Daniel heard the faint, strained violence of the captain's roaring.

"You'd better get on up there and unload," he told the man. "The captain is just sore enough he might not wait for you."

The man chuckled thinly. "I guess that's up to him," he said.

He flapped the reins and clucked good-naturedly at the horses.

"Hop up here with me," he said to Richard Daniel. "Or would you rather walk?"

"I'm not going with you," Richard Daniel said. "I am staying here. You can tell the captain."

For there was a baby sick and crying. There was a radio to fix. There was a culture to be planned and guided. There was a lot of work to do. This place, of all the places he had seen, had actual need of him.

The man chuckled once again. "The captain will not like it."

"Then tell him," said Richard Daniel, "to come down and talk to me. I am my own robot. I owe the captain nothing. I have more than paid any debt I owe him."

The wagon wheels began to turn and the man flapped the reins again.

"Make yourself at home," he said. "We're glad to have you stay."

"Thank you, sir," said Richard Daniel. "I'm pleased you want me."

He stood aside and watched the wagons lumber past, their wheels lifting and dropping thin films of powdered earth that floated in the air as an acrid dust.

Make yourself at home, the man had said before he'd driven off. And the words had a full round ring to them and a feel of warmth. It had been a long time, Richard Daniel thought, since he'd had a home.

A chance for resting and for knowing—that was what he needed. And a chance to serve, for now he knew that was the purpose in him. That was, perhaps, the real reason he was staying — because these people needed him . . . and he needed, queer as it might seem, this very need of theirs. Here on this Earth-like planet, through the generations, a new Earth would arise. And perhaps, given only time, he could transfer to the people of the planet all the powers and understanding he would find inside himself.

And stood astounded at the thought, for he'd not believed that he had it in him, this willing, almost eager, sacrifice. No messiah now, no robotic liberator, but a simple teacher of the human race.

Perhaps that had been the reason for it all from the first beginning. Perhaps all that had happened had been no more than the working out of human destiny. If the human race could not attain directly the paranormal power he held, this instinct of the mind, then they would gain it indirectly through the agency of one of their creations. Perhaps this, after all, unknown to Man himself, had been the prime purpose of the robots.

He turned and walked slowly down the length of village street, his back turned to the ship and the roaring of the captain, walked contentedly into this new world he'd found, into this world that he would make—not for himself, nor for robotic glory, but for a better Mankind and a happier.

Less than an hour before he'd congratulated himself on escaping all the traps of Earth, all the snares of Man. Not knowing that the greatest trap of all, the final and the fatal trap, lay on this present planet.

But that was wrong, he told himself. The trap had not been on this world at all, nor any other world. It had been inside himself.

He walked serenely down the wagon-rutted track in the soft, golden afternoon of a matchless autumn day, with the dog trotting at his heels.

Somewhere, just down the street, the sick baby lay crying in its crib.





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